

Programmable timer/counter

PM 6666

Service Manual

9499 465 01011

88 01 30 First edition



I&E

Industrial & Electro-acoustic Systems Division



**Industrial &
Electro-acoustic Systems**

PHILIPS

Important

As the instrument is an electrical apparatus, it may be operated only by trained personnel. Maintenance and repairs may also be carried out only by qualified personnel.

Please note

In correspondence concerning this instrument, please quote the type number and serial number as given on the type plate.



The counter is marked with this symbol when it is necessary for the user to refer to the manual.

Contents

1. Safety instructions 2

2. Drawings and diagrams

PM 6666

Basic board,

Component layout.	4
Input amplifier diagram.	5
Power supply and Logic unit	7

Front panel,

Component layout.	8
Circuit diagram	9

Key board,

Component layout.	10
Circuit diagram	11

Options

/1. oscillator (uncompensated crystal)

Component layout.	12
Circuit diagram	13

PM 9604, GPIB interface

Component layout.	14
Circuit diagram	15

PM 9605, Battery unit

Component layout.	16
Circuit diagram	17

PM 9608, 1.1 GHz HF input

Component layout.	18
Circuit diagram	19

3. Spare parts list

Mechanical parts	22
----------------------------	----

PM 6666 Basic board.	23
------------------------------	----

Front panel	29
-----------------------	----

Key board	30
---------------------	----

Options

/1. oscillator (uncompensated-crystal)	31
--	----

/3. oscillator (MTCXO)	31
----------------------------------	----

PM 9604 GPIB-interface.	32
---------------------------------	----

PM 9605 Battery unit	33
--------------------------------	----

PM 9606 Rack-mount kit	No spare parts
----------------------------------	----------------

PM 9607	31
-------------------	----

PM 9608 1.1 GHz HF-input	35
------------------------------------	----

Introduction

This is the first edition of the Service Manual of the PM 6666 Programmable Timer/Counter. The manual is far from complete but we feel that it is much better having limited information than no information at all while waiting for the complete manual.

1. Safety instructions

GENERAL INFORMATION

WARNING: These servicing instructions are for use by qualified personnel only. To reduce the risk of electrical shock, do not perform any servicing other than that specified in the Operating Manual unless you are fully qualified to do so.

This counter has been designed and tested in accordance with IEC Publication 348, Safety Requirements For Electronic Measuring Apparatus For Class 1 instruments, and has been supplied in a safe condition. This manual contains information and warnings that should be followed by the user and service technician to ensure safe operation and repair in order to keep the counter in a safe condition.

WARNING: The opening of covers or removal of parts, except those to which access can be gained by hand, is likely to expose live parts and accessible terminals which can be dangerous to life.

The counter must be disconnected from all voltage sources before it is opened.

Remember that capacitors inside the counter retain their charge even if the counter has been disconnected from all voltage sources.

GROUNDING

The counter is connected to ground via a sealed three-core power cable, which must be plugged into a socket outlet with a protective ground contact. No other method of grounding is permitted for this counter. When the counter is brought from a cold to a warm environment, condensation may cause a hazardous condition. Therefore, ensure that the grounding requirements are strictly met.

Power extension cables must always have a protective ground conductor.

WARNING: Any interruption of the protective ground conductor inside or outside the counter, or disconnection of the protective ground terminal, is likely to make the counter dangerous. DO NOT intentionally disrupt the protective grounding.

LINE VOLTAGE SETTING

Before connecting the counter to the line, ensure that it is set to the local line voltage. On delivery the counter is set to either 115 V or 220 V, as indicated on the line voltage selector on the rear panel. If the voltage setting is incorrect, set the line voltage selector in accordance with the local voltage before connecting the counter to the line.

SPARE PARTS

Components that are important for the safety of the instrument may only be renewed by components obtained from your local Philips organisation.

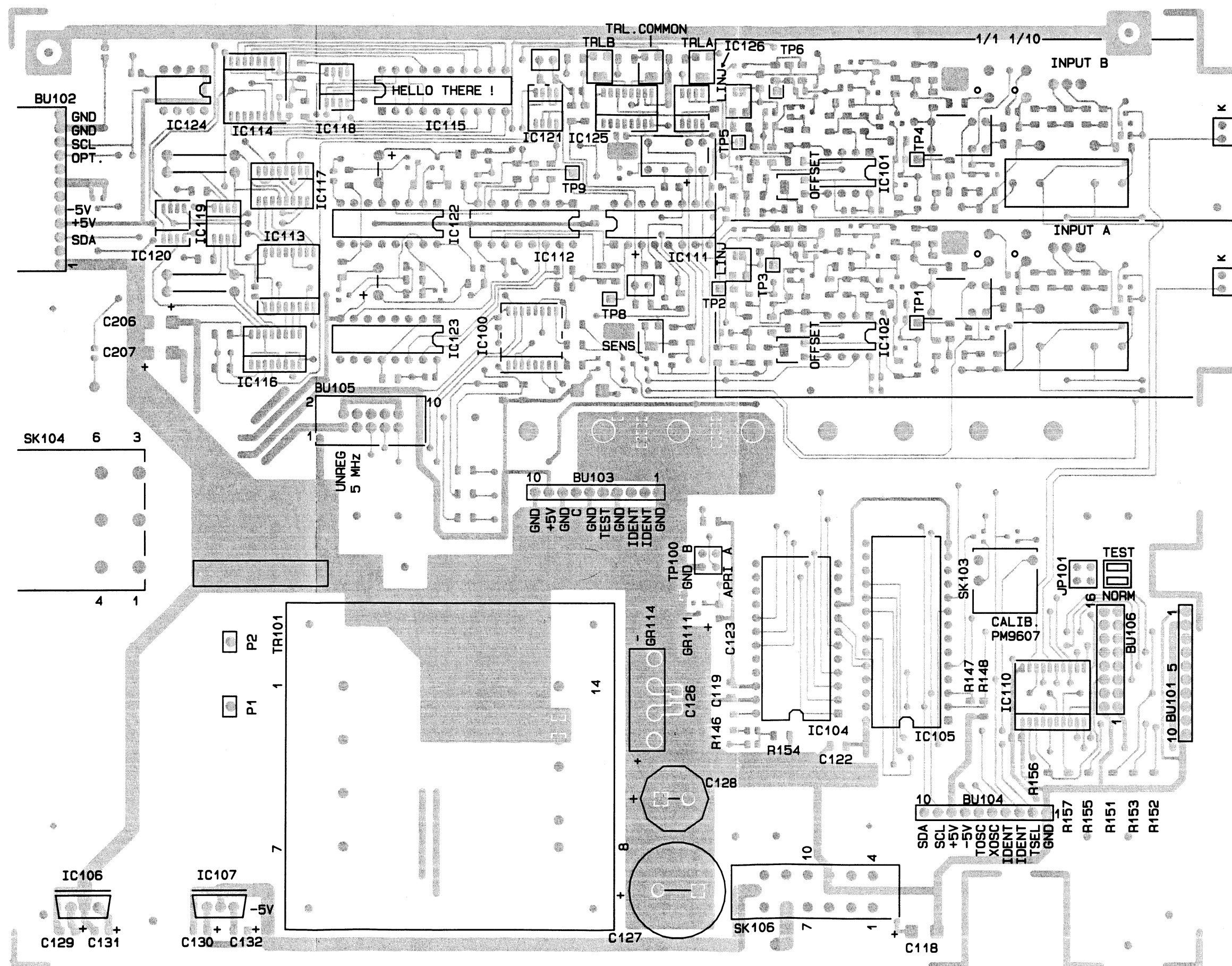
FUSES

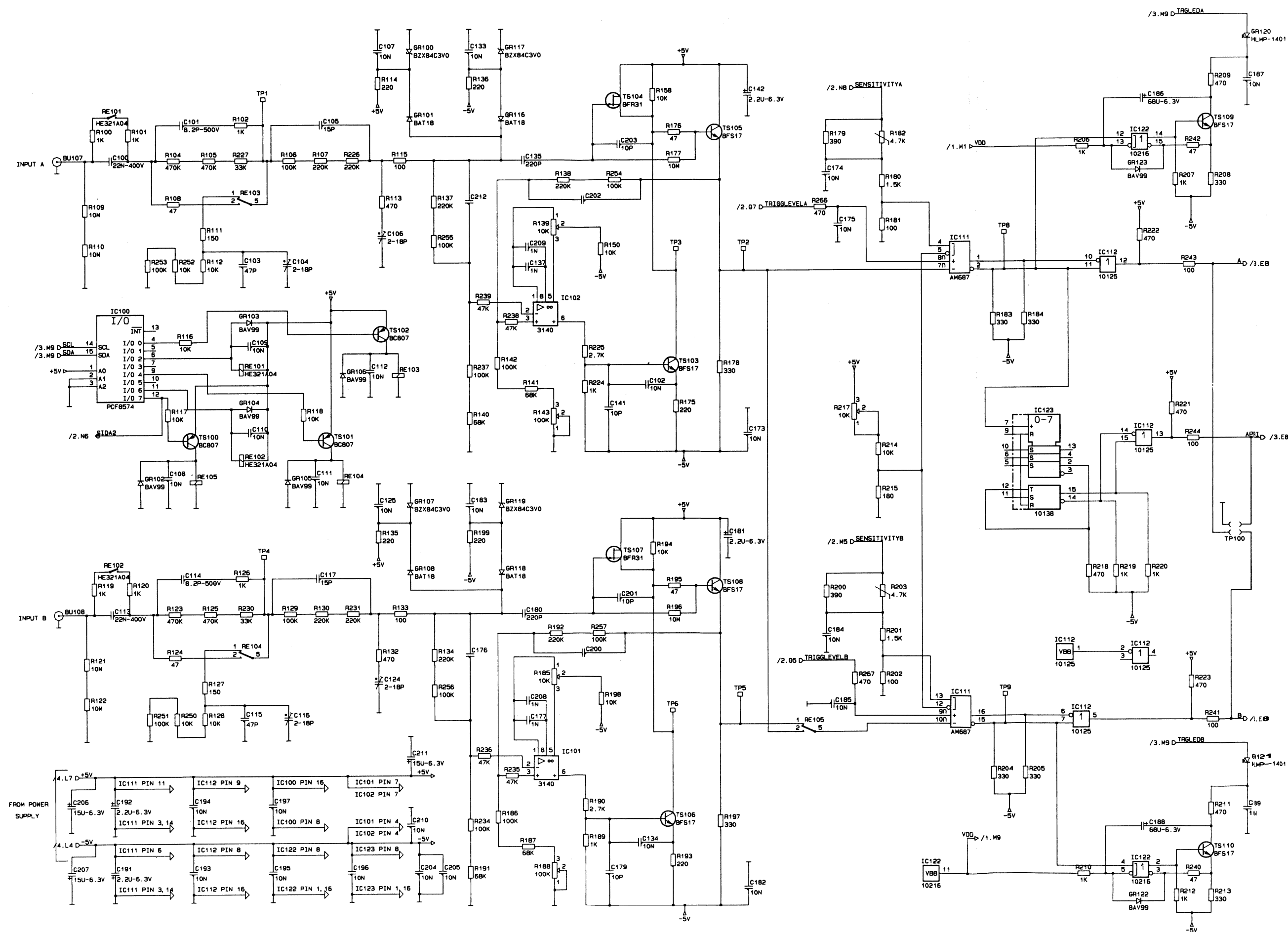
The counter is protected by one fuse inside the transformer. This fuse will blow if the transformer is dangerously overheated. The fuse cannot be replaced separately.

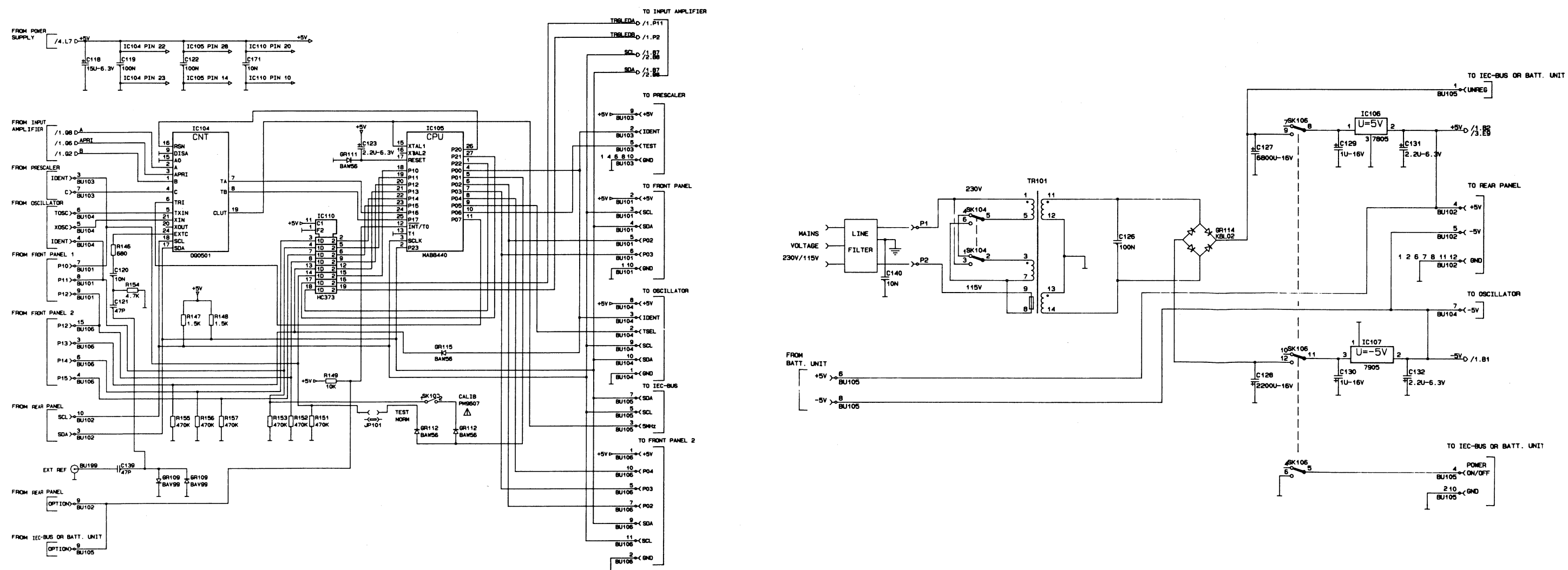
Always replace the complete transformer to ensure that the counter remains safe!

2. Drawings and diagrams

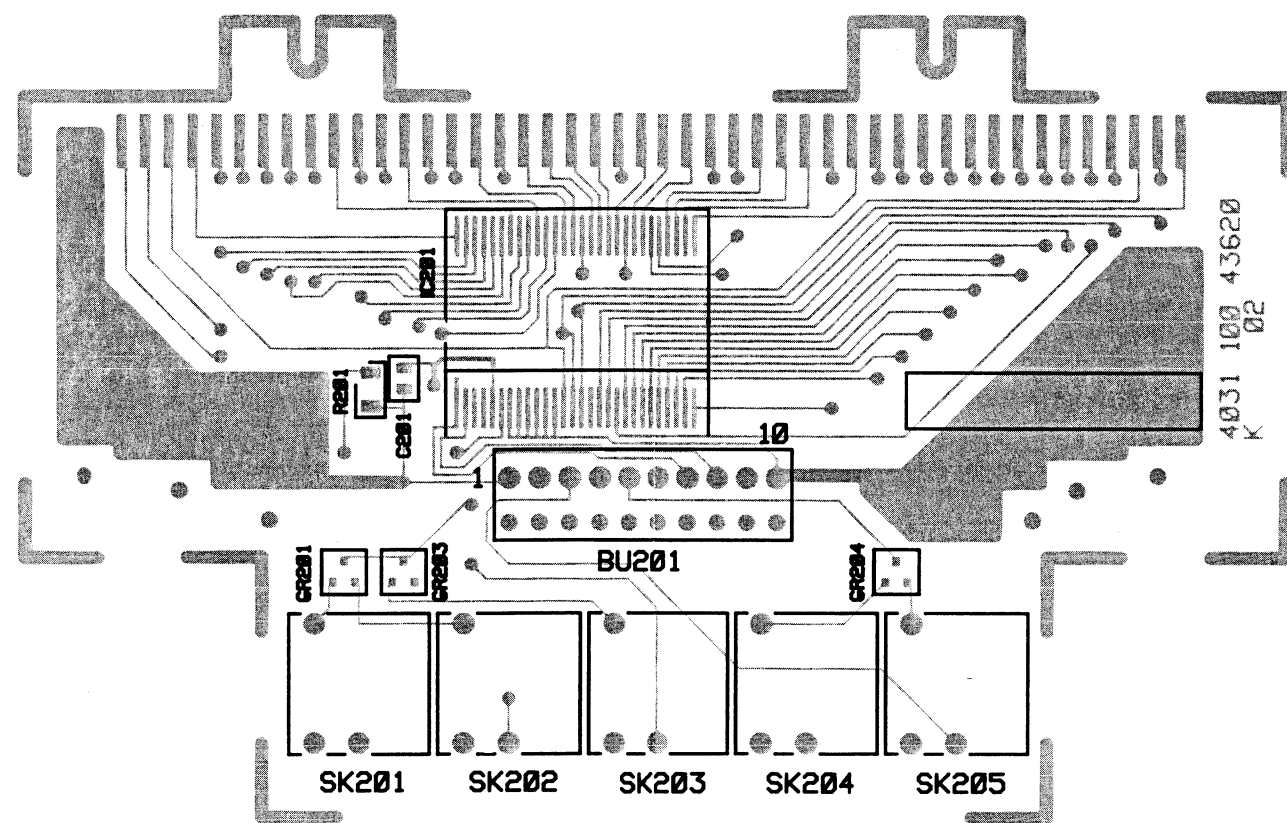
PM 6666 Basic board

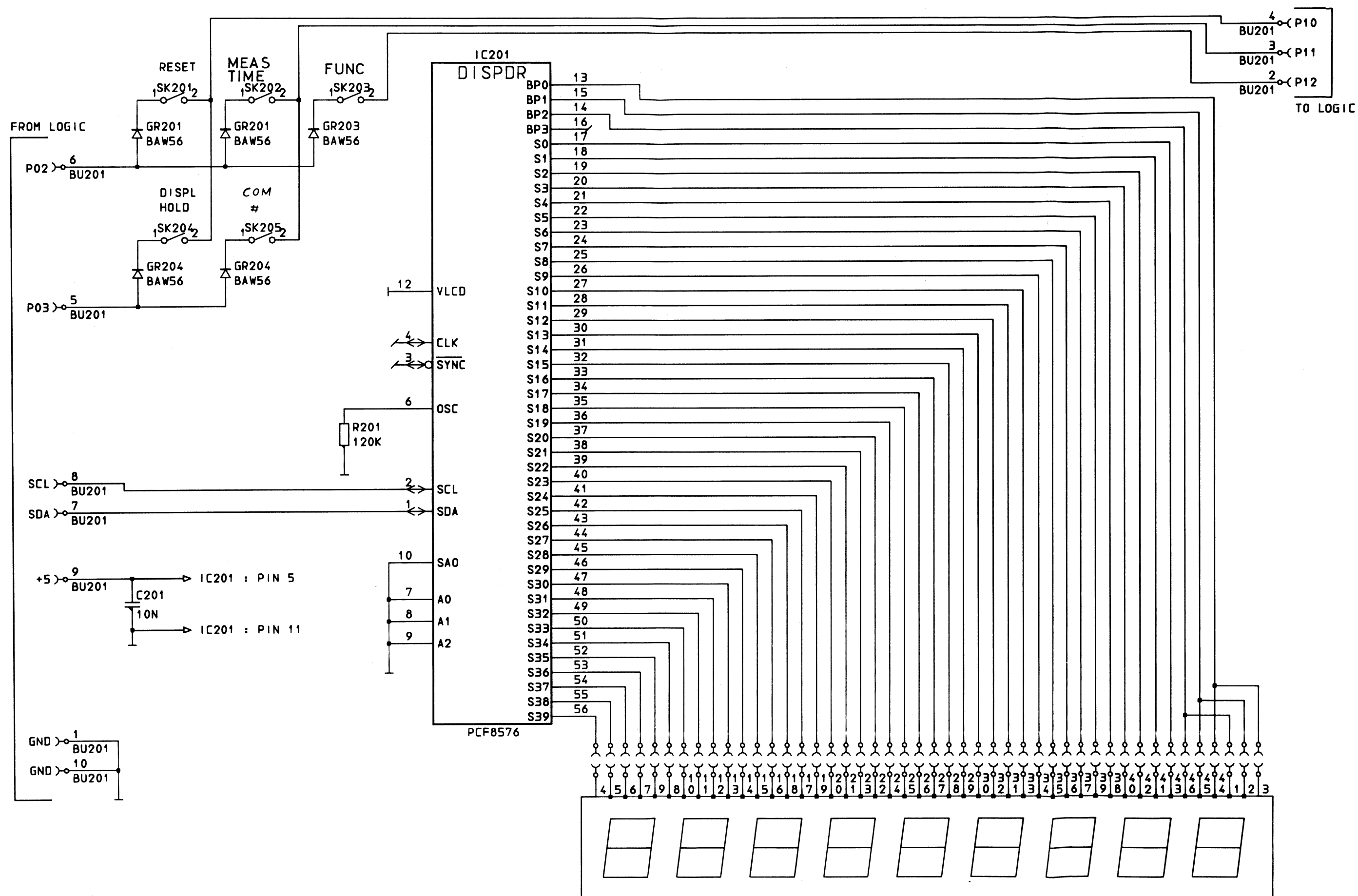






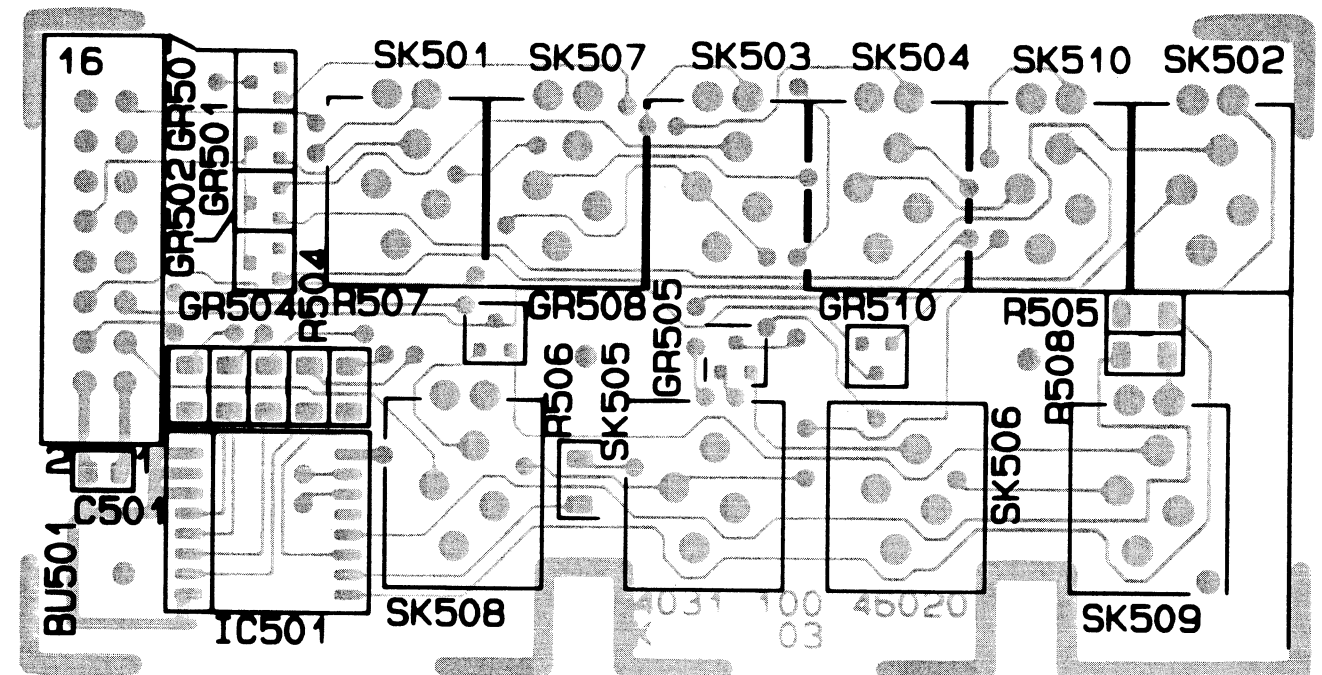
PM 6666 Front panel



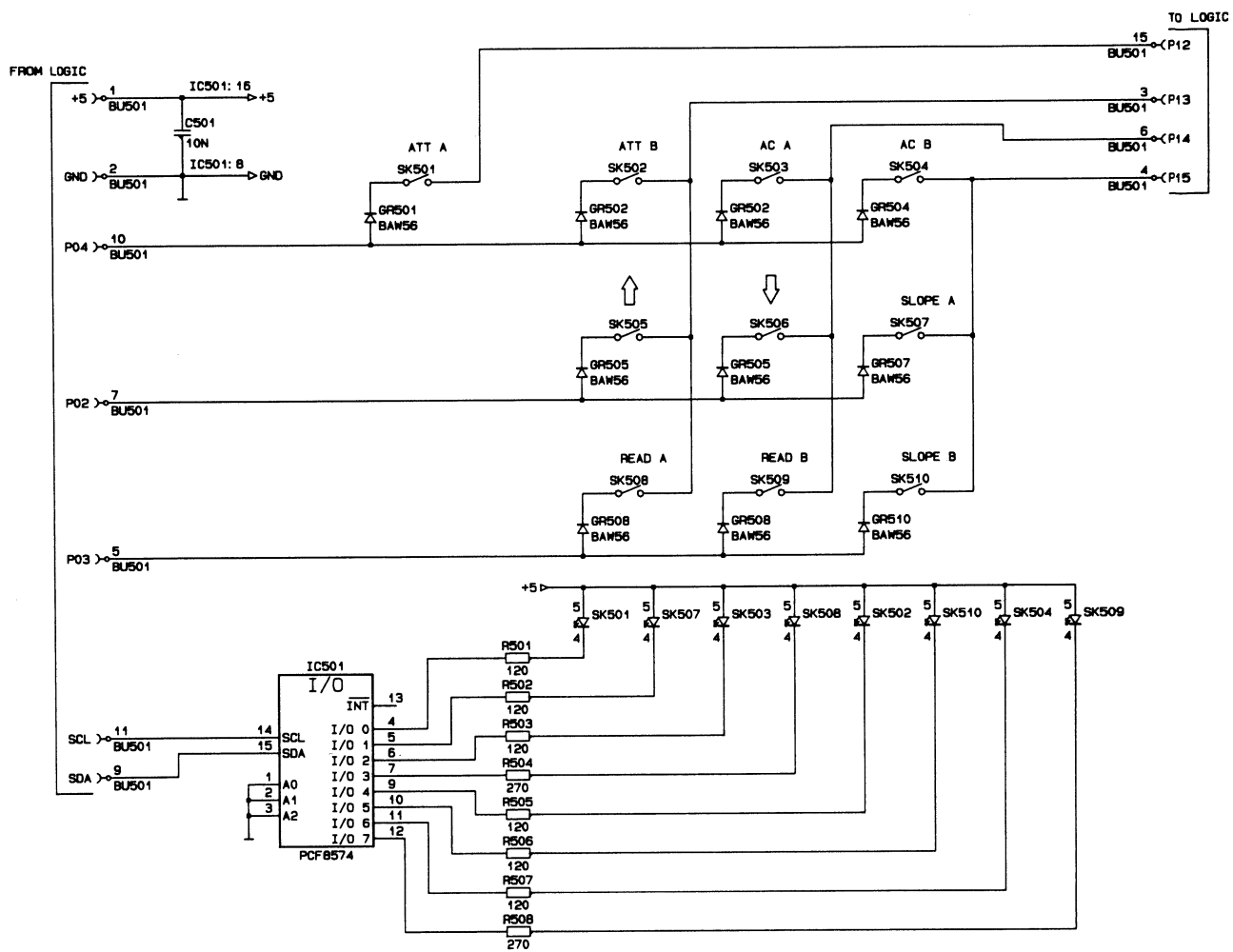


NO FUNCTION IN PM6665

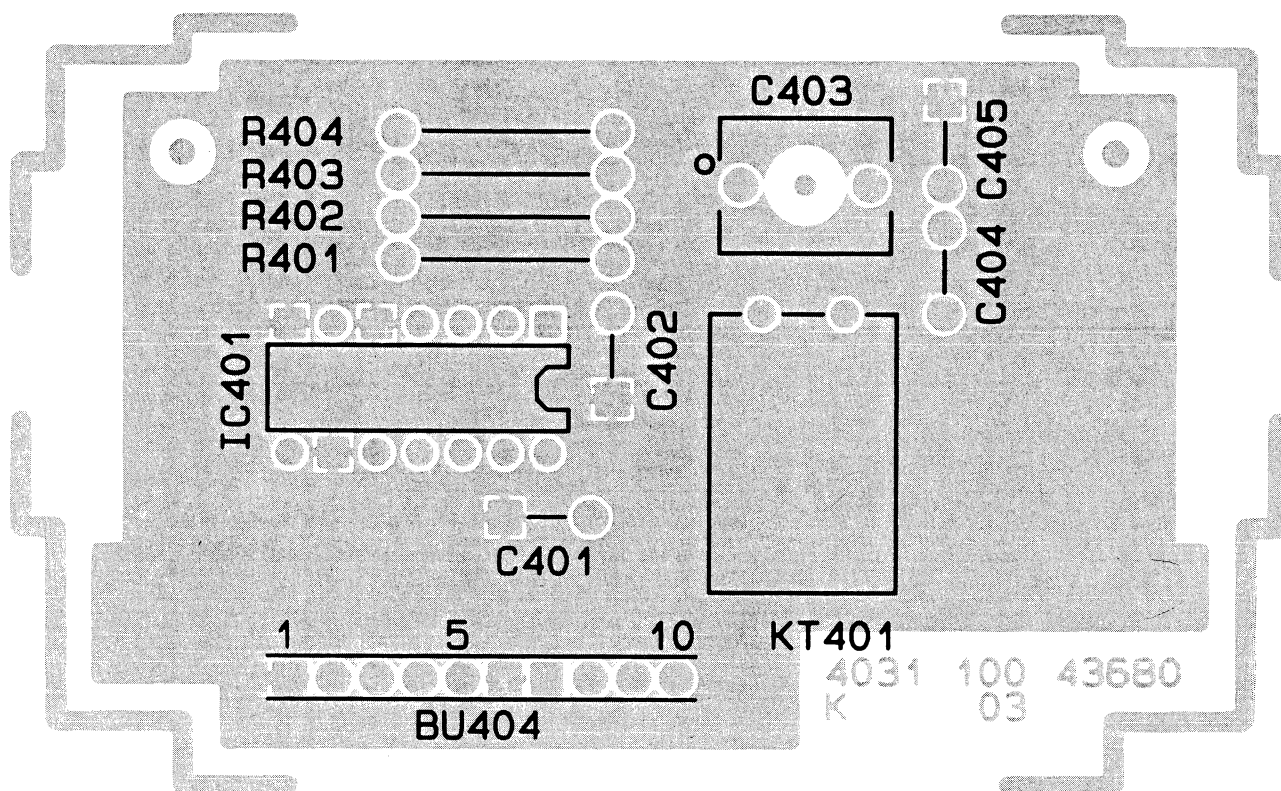
PM 6666 Key board



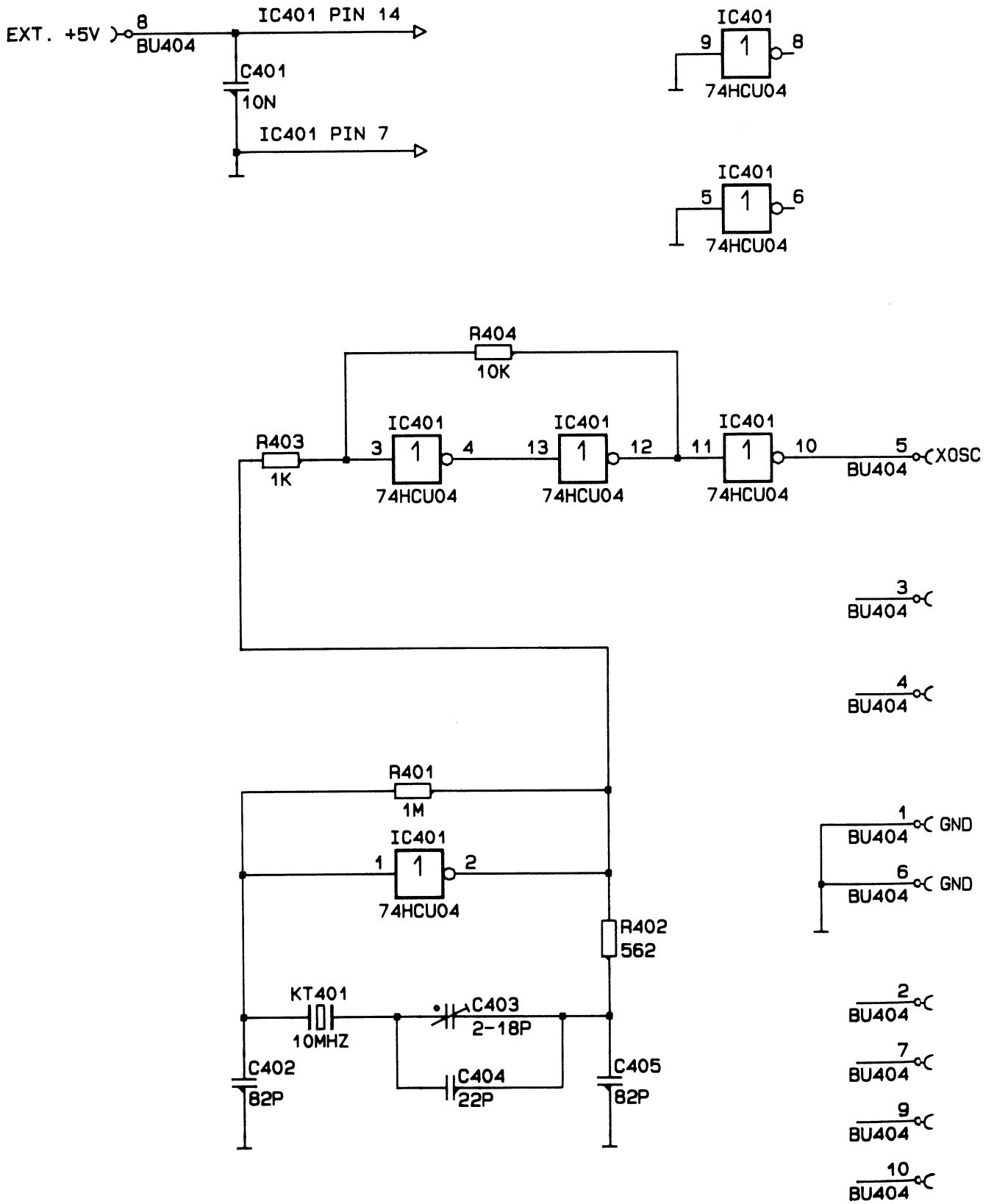
PM 6666 Key board



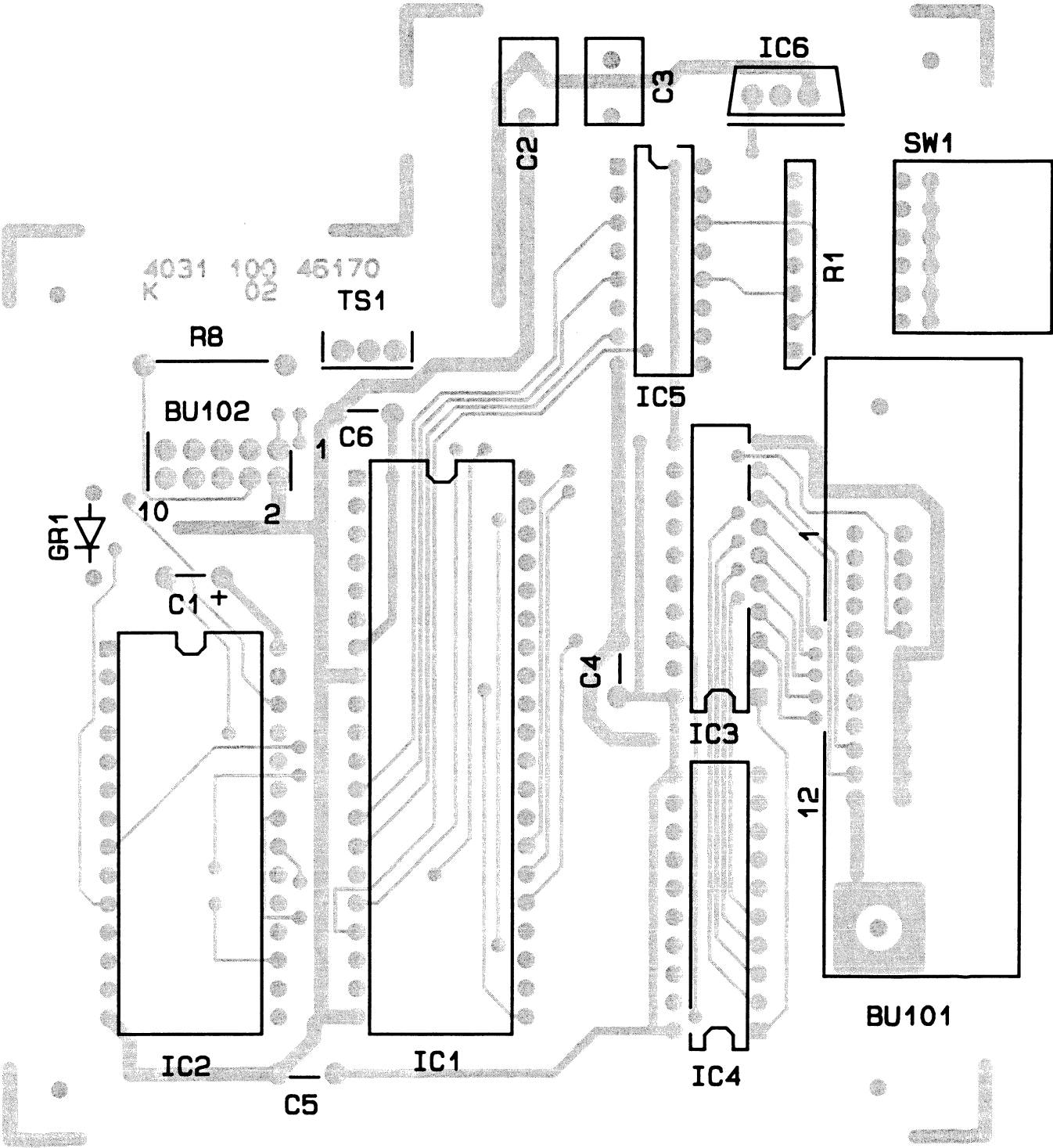
/.1. oscillator (uncompensated-crystal)



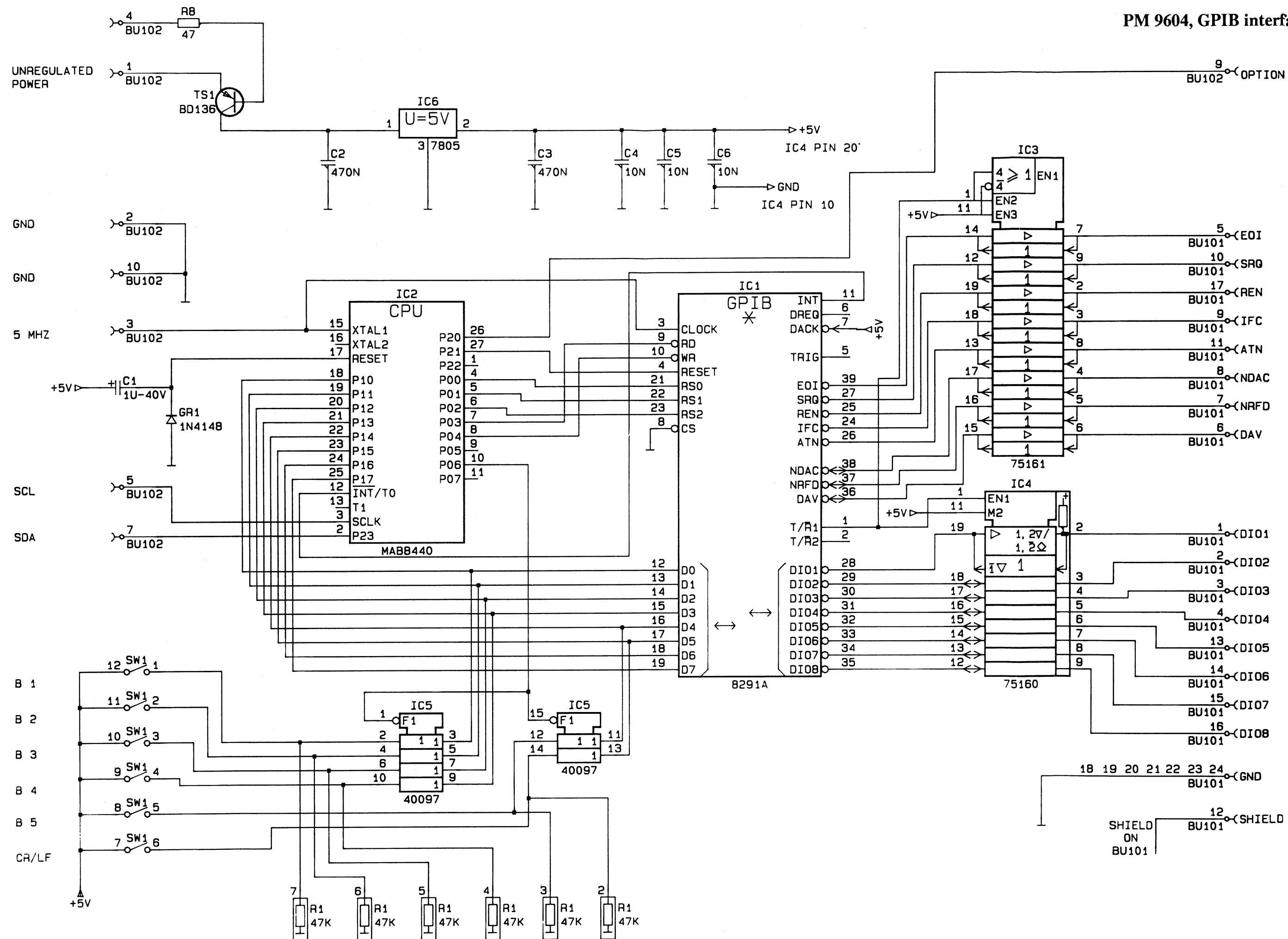
/.1. oscillator (uncompensated-crystal)

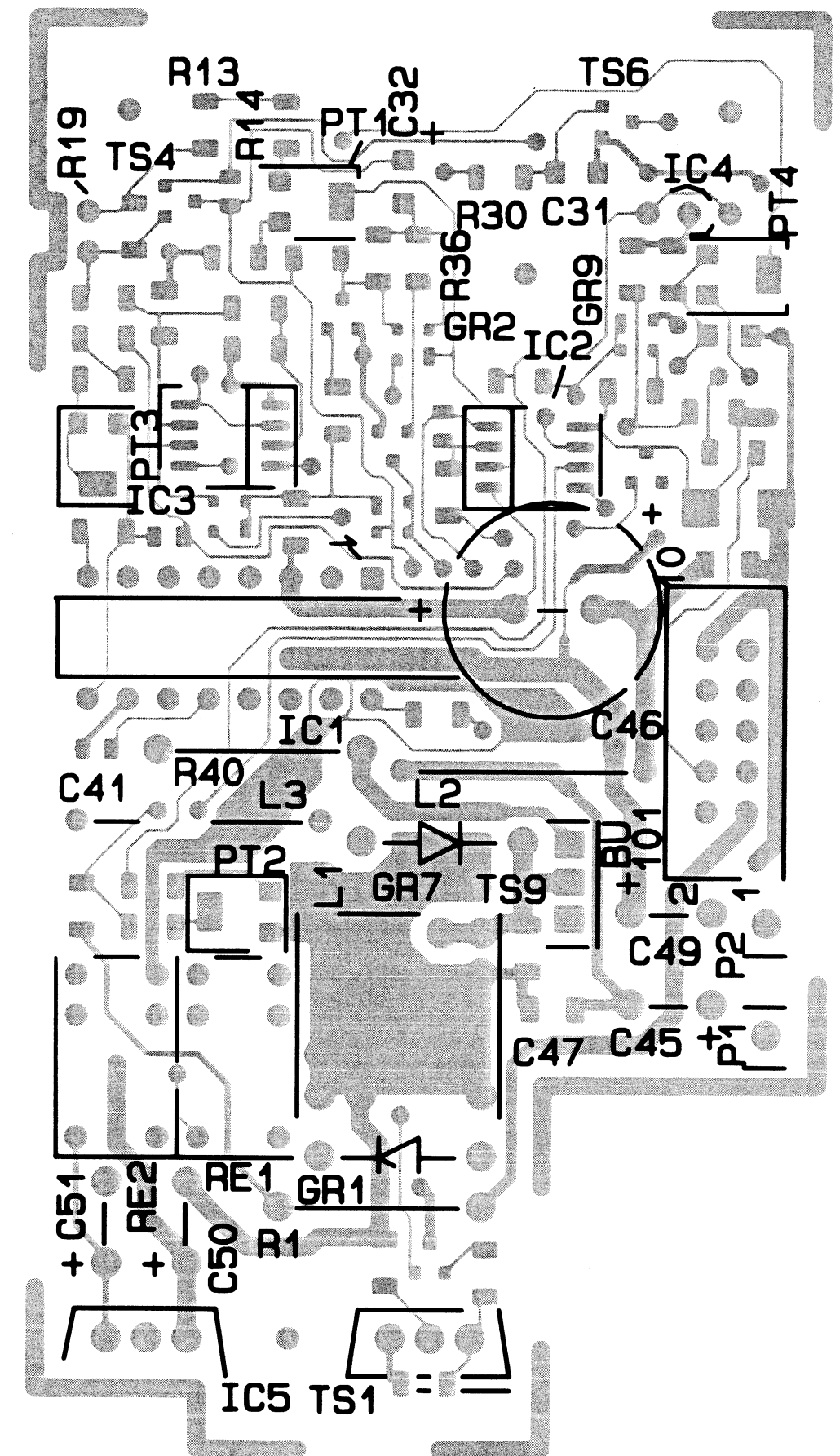


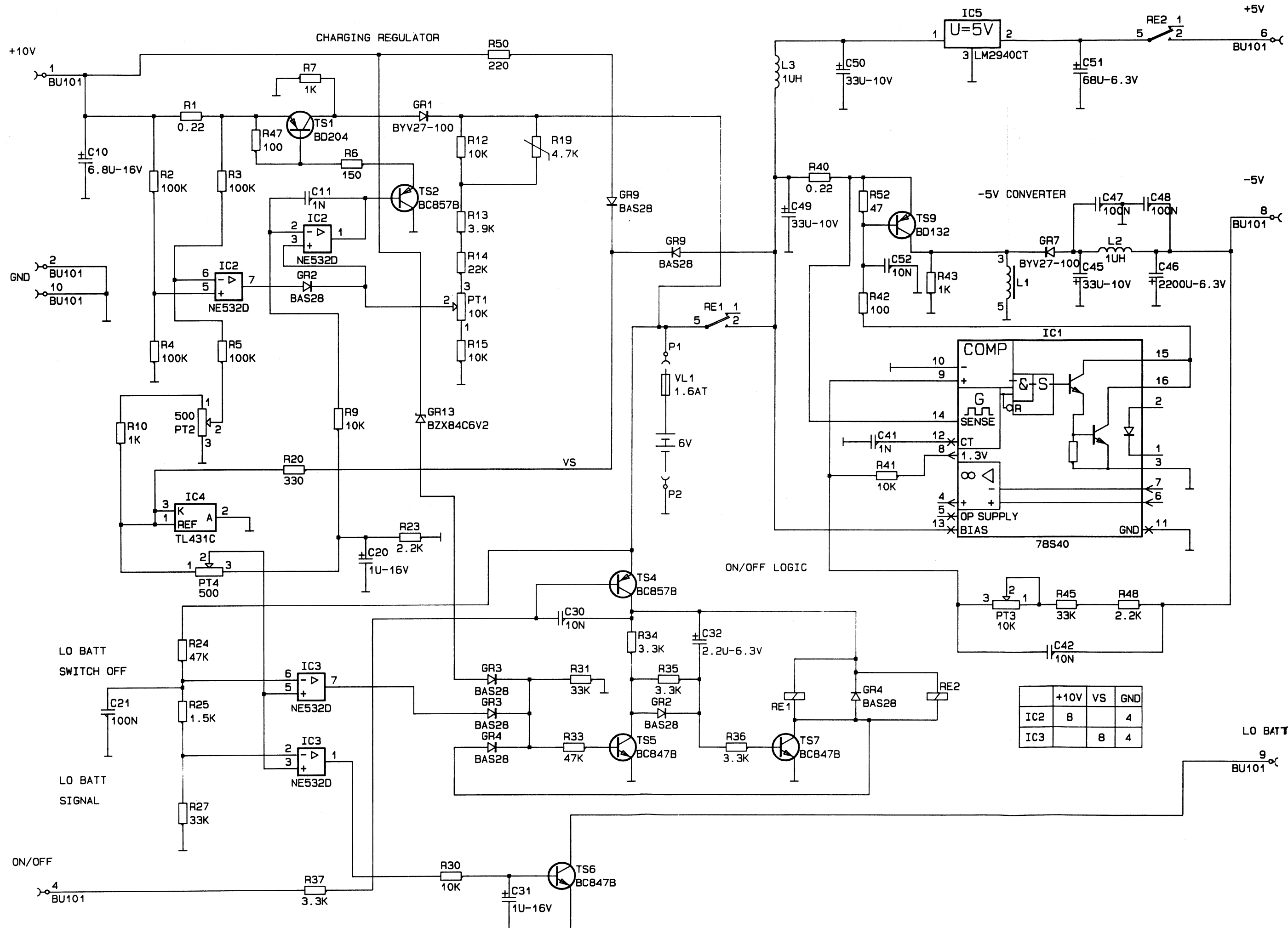
PM 9604, GPIB interface



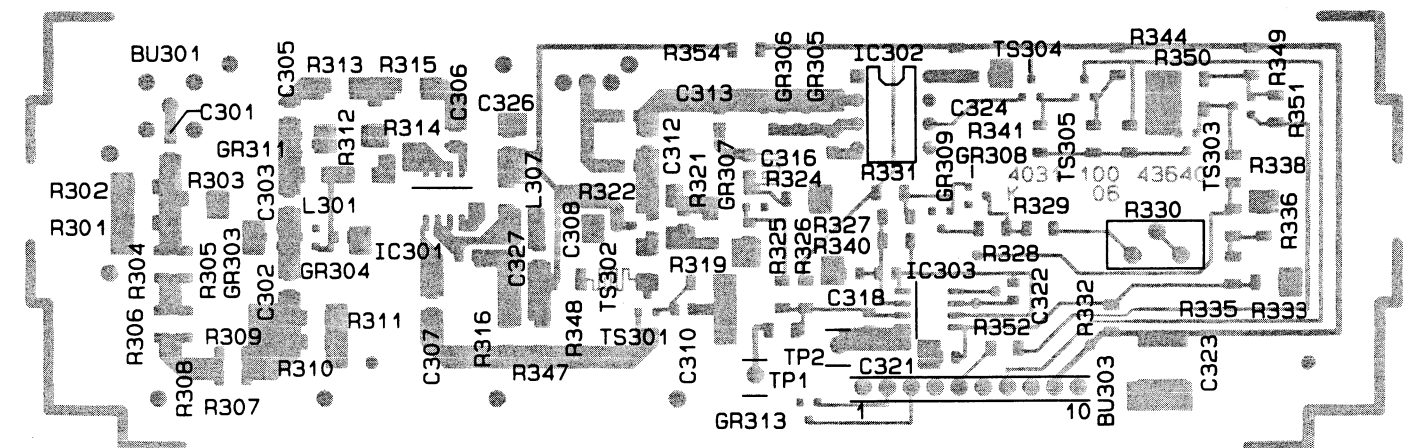
PM 9604, GPIB interface





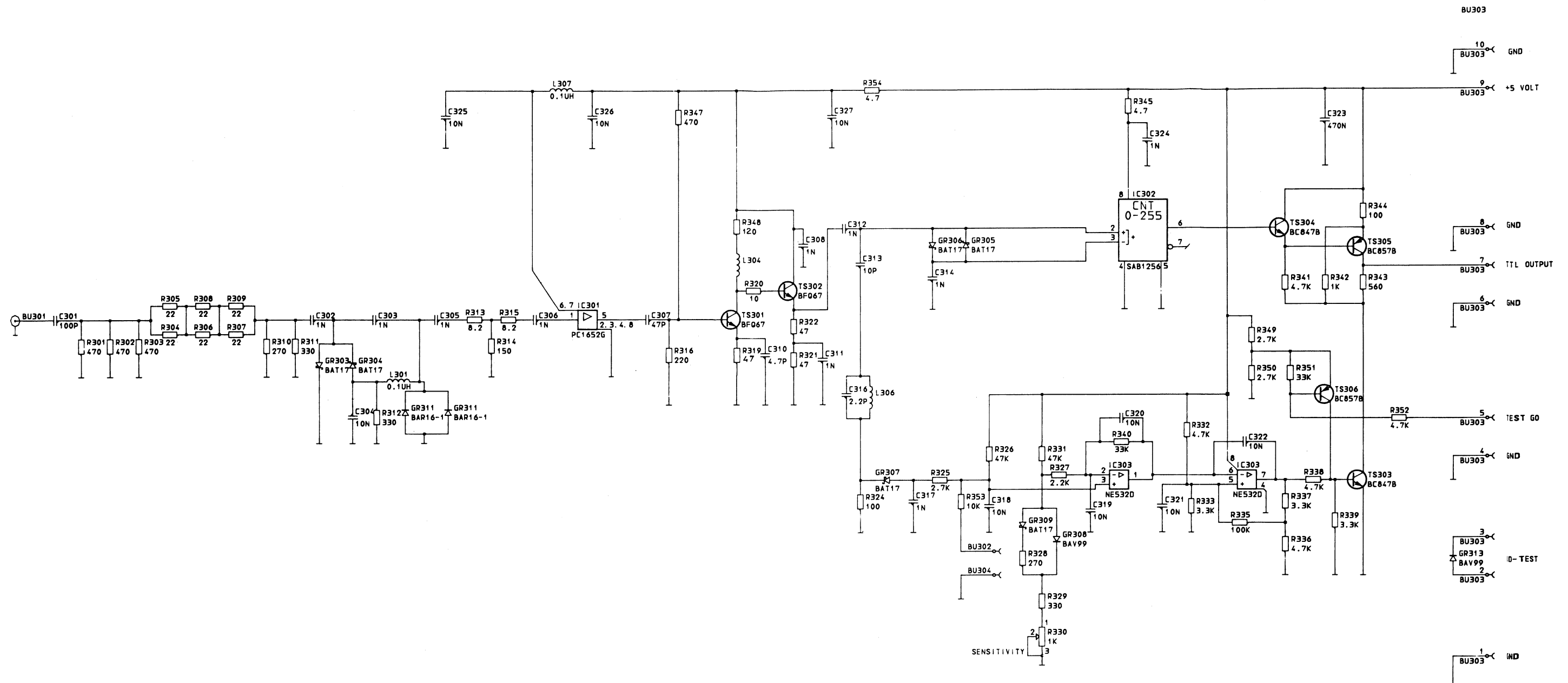


PM 9608, 1.1 GHz HF input



PM 9608, 1.1 GHz HF input

L304 AND L306 ARE PARTS OF THE PCB



3. Spare parts list

PM6666

TIMER/COUNTER

87-10-09

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION	
MECHANICAL PARTS			
5322 267 10004	CONNECTOR	0.00	KC-79-35
5322 121 42352	MAINS FILTER	1.00	FN326-1/07
4822 526 10097	FXF TUBE	0.00	3B 4.3X2 L=7.2
5322 450 60633	WINDOW	0.00	FOR LCD 29X101.5
5322 321 22314	CABLE ASSY	0.00	L=130 MINI-BNC
5322 321 22565	CABLE ASSY	0.00	L= 75 MINI-BNC
5322 130 90413	DISPLAY	0.00	PM6665-69
5322 267 70208	ZEBRA STRIP	0.00	S0.25P100.0L6.0H2.8W
5322 447 91443	COVER	0.00	PM6665-69
5322 462 41115	REAR FOOT	0.00	PM6665-69
5322 401 11102	TILTING SUPPORT	0.00	PM6665-69
5322 498 10263	EXTENSION BAR	0.00	PM6665-69
5322 462 41116	BOTTOM FOOT	0.00	PM6665-69
5322 462 41117	RUBBER FOOT	0.00	PM6665-69 18X10X8

PM6666

TIMER/COUNTER

88-01-15

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION	ITEM-NO
BASIC BOARD, U1			
5322 265 40379	CONNECTOR	5.00 PDL 22-05-1059 3094-05F	BU101
5322 265 40634	CONNECTOR	12.00 PDL 76382-312	BU102
5322 265 64028	CONNECTOR	10.00 PDL 22-03-2101 4030-10A	BU103
5322 265 64028	CONNECTOR	10.00 PDL 22-03-2101 4030-10A	BU104
5322 265 64028	CONNECTOR	10.00 PDL LOW PROFILE HEADER	BU105
5322 265 40687	CONNECTOR	16.00 PDL F095 DOUBLE ROW	BU106
5322 447 84642	CONTACT PIN	0.00 MINICOAX FOR PC-B	BU107
5322 447 84642	BUSHING	0.00 MINICOAX FOR PC-B	BU107
5322 447 84642	CONTACT PIN	0.00 MINICOAX FOR PC-B	BU108
5322 447 84642	BUSHING	0.00 MINICOAX FOR PC-B	BU108
5322 121 40308	CAPACITOR	22.00 NF 10% 400V	C100
4822 122 31194	CAPACITOR	8.20 PF +-0.25PF 500V NPO 2M	C101
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C102
5322 122 32452	CAPACITOR	47.00 PF 5% 50V NPO 0805	C103
5322 125 50051	CAPACITOR	18.00 PF 2.0-18PF 300V	C104
5322 122 32417	CAPACITOR	22.00 PF 2% 500V NPO 2M	C105
5322 125 50051	CAPACITOR	18.00 PF 2.0-18PF 300V	C106
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C107
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C108
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C109
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C110
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C111
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C112
5322 121 40308	CAPACITOR	22.00 NF 10% 400V	C113
4822 122 31194	CAPACITOR	8.20 PF +-0.25PF 500V NPO 2M	C114
5322 122 32452	CAPACITOR	47.00 PF 5% 50V NPO 0805	C115
5322 125 50051	CAPACITOR	18.00 PF 2.0-18PF 300V	C116
5322 122 32417	CAPACITOR	22.00 PF 2% 500V NPO 2M	C117
5322 124 10684	CAPACITOR	15.00 UF 20%6.3V 6.0X3.2 MOLD	C118
5322 121 50906	CAPACITOR	100.00 NF 10% 63V X7R 1206	C119
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C120
5322 122 32452	CAPACITOR	47.00 PF 5% 50V NPO 0805	C121
5322 121 50906	CAPACITOR	100.00 NF 10% 63V X7R 1206	C122
5322 124 10685	CAPACITOR	2.20 UF 20%6.3V 3.2X1.6 MOLD	C123
5322 125 50051	CAPACITOR	18.00 PF 2.0-18PF 300V	C124
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C125
5322 121 50906	CAPACITOR	100.00 NF 10% 63V X7R 1206	C126
5322 124 41367	CAPACITOR	6800.00 UF 20% 16V ECEA1CU682	C127
5322 124 41366	CAPACITOR	2200.00 UF 20% 16V ECEA1CU222	C128
5322 124 10686	CAPACITOR	1.00 UF 20% 16V 3.2X1.6 MOLD	C129
5322 124 10686	CAPACITOR	1.00 UF 20% 16V 3.2X1.6 MOLD	C130
5322 124 10685	CAPACITOR	2.20 UF 20%6.3V 3.2X1.6 MOLD	C131
5322 124 10685	CAPACITOR	2.20 UF 20%6.3V 3.2X1.6 MOLD	C132
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C133
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C134
4822 122 31747	CAPACITOR	220.00 PF 5% 50V NPO 0805	C135
5322 122 34123	CAPACITOR	1.00 NF 20% 50V X7R 0805	C137
5322 122 32452	CAPACITOR	47.00 PF 5% 50V NPO 0805	C139
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C140
5322 122 32448	CAPACITOR	10.00 PF 5% 50V NPO 0805	C141
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C142
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C171
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C172
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C173
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C174

PM6666

TIMER/COUNTER

88-01-15

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION	ITEM-NO
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C175
5322 122 34123	CAPACITOR	1.00 NF 20% 50V X7R 0805	C177
5322 122 32448	CAPACITOR	10.00 PF 5% 50V NP0 0805	C179
4822 122 31747	CAPACITOR	220.00 PF 5% 50V NP0 0805	C180
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C181
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C182
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C183
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C184
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C185
5322 124 10455	CAPACITOR	68.00 UF 20% 6.3V SOLID AL	C186
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C187
5322 124 10455	CAPACITOR	68.00 UF 20% 6.3V SOLID AL	C188
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C189
5322 124 10685	CAPACITOR	2.20 UF 20%6.3V 3.2X1.6 MOLD	C191
5322 124 10685	CAPACITOR	2.20 UF 20%6.3V 3.2X1.6 MOLD	C192
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C193
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C194
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C195
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C196
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C197
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C198
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C199
5322 122 32448	CAPACITOR	10.00 PF 5% 50V NP0 0805	C201
5322 122 32448	CAPACITOR	10.00 PF 5% 50V NP0 0805	C203
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C204
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C205
5322 124 10684	CAPACITOR	15.00 UF 20%6.3V 6.0X3.2 MOLD	C206
5322 124 10684	CAPACITOR	15.00 UF 20%6.3V 6.0X3.2 MOLD	C207
5322 122 34123	CAPACITOR	1.00 NF 20% 50V X7R 0805	C208
5322 122 34123	CAPACITOR	1.00 NF 20% 50V X7R 0805	C209
5322 130 32739	DIODE	0.35 W BZX84/C3V0 SOT23	GR100
5322 130 32076	DIODE	0.10 A BAT18 35V 1PF SOT23	GR101
5322 130 34337	DIODE	0.10 A BAV99 SOT23	GR102
5322 130 34337	DIODE	0.10 A BAV99 SOT23	GR103
5322 130 34337	DIODE	0.10 A BAV99 SOT23	GR104
5322 130 34337	DIODE	0.10 A BAV99 SOT23	GR105
5322 130 34337	DIODE	0.10 A BAV99 SOT23	GR106
5322 130 32739	DIODE	0.35 W BZX84/C3V0 SOT23	GR107
5322 130 32076	DIODE	0.10 A BAT18 35V 1PF SOT23	GR108
5322 130 34337	DIODE	0.10 A BAV99 SOT23	GR109
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR111
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR112
4822 130 32003	BRIDGE RECTIF	4.00 A KBL02 200V	GR114
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR115
5322 130 32076	DIODE	0.10 A BAT18 35V 1PF SOT23	GR116
5322 130 32739	DIODE	0.35 W BZX84/C3V0 SOT23	GR117
5322 130 32076	DIODE	0.10 A BAT18 35V 1PF SOT23	GR118
5322 130 32739	DIODE	0.35 W BZX84/C3V0 SOT23	GR119
5322 130 80508	LED	3.00 MM GUL DIFFUS 90 DEG	GR120
5322 130 80508	LED	3.00 MM GUL DIFFUS 90 DEG	GR121
5322 130 34337	DIODE	0.10 A BAV99 SOT23	GR122
5322 130 34337	DIODE	0.10 A BAV99 SOT23	GR123
5322 209 11578	IC	0.00 PCF8574T SO-16L	IC100
5322 209 86201	IC	0.00 CA3140E S SUPPL DIL8	IC101
5322 209 86201	IC	0.00 CA3140E S SUPPL DIL8	IC102
5322 209 71559	LSI	0.00 QQ0501	IC104
5322 209 51439	IC	0.00 PM6666 MABB461	IC105

PM6666

TIMER/COUNTER

88-01-15

SERVICECODE	DESCRIPTION	ARTICLE	SPECIFICATION	ITEM-NO
5322 209 84454	IC	5.00 V	MC7805CT 1A TO-220	IC106
5322 130 44843	IC	-5.00 V	MC7905CT 1A TO-220	IC107
5322 209 71555	IC	0.00	PC74HC373T SO-20	IC110
5322 209 82866	IC	0.00	AM687DL	IC111
5322 209 70313	IC	0.00	MC10125P	IC112
5322 209 11578	IC	0.00	PCF8574T SO-16L	IC113
5322 209 11578	IC	0.00	PCF8574T SO-16L	IC114
5322 209 70351	IC	8.00 BIT	7528 DUAL LTCH DIL20	IC115
5322 209 14481	IC	0.00	4053B SO16	IC116
5322 209 14481	IC	0.00	4053B SO16	IC117
5322 209 71553	IC	0.00	NE532D DUAL SO-8	IC118
5322 209 71553	IC	0.00	NE532D DUAL SO-8	IC119
5322 209 71553	IC	0.00	NE532D DUAL SO-8	IC120
5322 209 71553	IC	0.00	NE532D DUAL SO-8	IC121
5322 209 84825	IC	0.00	MC10216P	IC122
5322 209 86203	IC	0.00	MC10138P	IC123
5322 209 82864	IC-REF	2.50 V	MC1403U DIL-8	IC124
5322 209 14481	IC	0.00	4053B SO16	IC125
5322 209 71553	IC	0.00	NE532D DUAL SO-8	IC126
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R100
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R101
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R102
5322 116 80447	RESISTOR	470.00 KOHM	1% .125W 100PPM 1206	R104
5322 116 80447	RESISTOR	470.00 KOHM	1% .125W 100PPM 1206	R105
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R106
5322 116 80436	RESISTOR	220.00 KOHM	1% .125W 100PPM 1206	R107
5322 116 80448	RESISTOR	47.00 OHM	1% .125W 100PPM 1206	R108
5322 111 90094	RESISTOR	10.00 MOHM	10% 0.25W RC-01 1206	R109
5322 111 90094	RESISTOR	10.00 MOHM	10% 0.25W RC-01 1206	R110
5322 116 80431	RESISTOR	150.00 OHM	1% .125W 100PPM 1206	R111
5322 116 80428	RESISTOR	10.00 KOHM	1% .125W 100PPM 1206	R112
5322 116 80444	RESISTOR	470.00 OHM	1% .125W 100PPM 1206	R113
5322 116 80433	RESISTOR	220.00 OHM	1% .125W 100PPM 1206	R114
5322 116 80426	RESISTOR	100.00 OHM	1% .125W 100PPM 1206	R115
5322 116 80428	RESISTOR	10.00 KOHM	1% .125W 100PPM 1206	R116
5322 116 80428	RESISTOR	10.00 KOHM	1% .125W 100PPM 1206	R117
5322 116 80428	RESISTOR	10.00 KOHM	1% .125W 100PPM 1206	R118
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R119
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R120
5322 111 90094	RESISTOR	10.00 MOHM	10% 0.25W RC-01 1206	R121
5322 111 90094	RESISTOR	10.00 MOHM	10% 0.25W RC-01 1206	R122
5322 116 80447	RESISTOR	470.00 KOHM	1% .125W 100PPM 1206	R123
5322 116 80448	RESISTOR	47.00 OHM	1% .125W 100PPM 1206	R124
5322 116 80447	RESISTOR	470.00 KOHM	1% .125W 100PPM 1206	R125
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R126
5322 116 80431	RESISTOR	150.00 OHM	1% .125W 100PPM 1206	R127
5322 116 80428	RESISTOR	10.00 KOHM	1% .125W 100PPM 1206	R128
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R129
5322 116 80436	RESISTOR	220.00 KOHM	1% .125W 100PPM 1206	R130
5322 116 80444	RESISTOR	470.00 OHM	1% .125W 100PPM 1206	R132
5322 116 80426	RESISTOR	100.00 OHM	1% .125W 100PPM 1206	R133
5322 116 80436	RESISTOR	220.00 KOHM	1% .125W 100PPM 1206	R134
5322 116 80433	RESISTOR	220.00 OHM	1% .125W 100PPM 1206	R135
5322 116 80433	RESISTOR	220.00 OHM	1% .125W 100PPM 1206	R136
5322 116 80436	RESISTOR	220.00 KOHM	1% .125W 100PPM 1206	R137
5322 116 80436	RESISTOR	220.00 KOHM	1% .125W 100PPM 1206	R138
5322 100 11143	POTENTIOMETER	10.00 KOHM	25% 0.1W 3304X-1-103	R139

PM6666

TIMER/COUNTER

88-01-15

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION				ITEM-NO
5322 116 80451	RESISTOR	68.00	KOHM	1% .125W 100PPM 1206	R140	
5322 116 80451	RESISTOR	68.00	KOHM	1% .125W 100PPM 1206	R141	
5322 116 80429	RESISTOR	100.00	KOHM	1% .125W 100PPM 1206	R142	
5322 101 10841	POTENTIOMETER	100.00	KOHM	3304X-1-104	R143	
5322 116 80449	RESISTOR	680.00	OHM	1% .125W 100PPM 1206	R146	
5322 116 80432	RESISTOR	1.50	KOHM	1% .125W 100PPM 1206	R147	
5322 116 80432	RESISTOR	1.50	KOHM	1% .125W 100PPM 1206	R148	
5322 116 80428	RESISTOR	10.00	KOHM	1% .125W 100PPM 1206	R149	
5322 116 80428	RESISTOR	10.00	KOHM	1% .125W 100PPM 1206	R150	
5322 116 80447	RESISTOR	470.00	KOHM	1% .125W 100PPM 1206	R151	
5322 116 80447	RESISTOR	470.00	KOHM	1% .125W 100PPM 1206	R152	
5322 116 80447	RESISTOR	470.00	KOHM	1% .125W 100PPM 1206	R153	
5322 116 80445	RESISTOR	4.70	KOHM	1% .125W 100PPM 1206	R154	
5322 116 80447	RESISTOR	470.00	KOHM	1% .125W 100PPM 1206	R155	
5322 116 80447	RESISTOR	470.00	KOHM	1% .125W 100PPM 1206	R156	
5322 116 80447	RESISTOR	470.00	KOHM	1% .125W 100PPM 1206	R157	
5322 116 80428	RESISTOR	10.00	KOHM	1% .125W 100PPM 1206	R158	
5322 116 80445	RESISTOR	4.70	KOHM	1% .125W 100PPM 1206	R159	
4822 116 53022	RESISTOR	10.00	KOHM	1% 0.5W MRS25	R160	
4822 116 53022	RESISTOR	10.00	KOHM	1% 0.5W MRS25	R161	
5322 116 80445	RESISTOR	4.70	KOHM	1% .125W 100PPM 1206	R162	
4822 116 53022	RESISTOR	10.00	KOHM	1% 0.5W MRS25	R166	
4822 116 53022	RESISTOR	10.00	KOHM	1% 0.5W MRS25	R167	
5322 116 80445	RESISTOR	4.70	KOHM	1% .125W 100PPM 1206	R168	
5322 116 80445	RESISTOR	4.70	KOHM	1% .125W 100PPM 1206	R172	
5322 116 80434	RESISTOR	2.20	KOHM	1% .125W 100PPM 1206	R173	
5322 116 80432	RESISTOR	1.50	KOHM	1% .125W 100PPM 1206	R174	
5322 116 80433	RESISTOR	220.00	OHM	1% .125W 100PPM 1206	R175	
5322 116 80448	RESISTOR	47.00	OHM	1% .125W 100PPM 1206	R176	
5322 111 90094	RESISTOR	10.00	MOHM	10% 0.25W RC-01 1206	R177	
5322 116 80438	RESISTOR	330.00	OHM	1% .125W 100PPM 1206	R178	
5322 116 80442	RESISTOR	390.00	OHM	1% .125W 100PPM 1206	R179	
5322 116 80432	RESISTOR	1.50	KOHM	1% .125W 100PPM 1206	R180	
5322 116 80426	RESISTOR	100.00	OHM	1% .125W 100PPM 1206	R181	
5322 116 30239	THERMISTOR	4.70	KOHM	5% 0.5W NTC	R182	
5322 116 80438	RESISTOR	330.00	OHM	1% .125W 100PPM 1206	R183	
5322 116 80438	RESISTOR	330.00	OHM	1% .125W 100PPM 1206	R184	
5322 100 11143	POTENTIOMETER	10.00	KOHM	25% 0.1W 3304X-1-103	R185	
5322 116 80429	RESISTOR	100.00	KOHM	1% .125W 100PPM 1206	R186	
5322 116 80451	RESISTOR	68.00	KOHM	1% .125W 100PPM 1206	R187	
5322 101 10841	POTENTIOMETER	100.00	KOHM	3304X-1-104	R188	
5322 116 80427	RESISTOR	1.00	KOHM	1% .125W 100PPM 1206	R189	
5322 116 80437	RESISTOR	2.70	KOHM	1% .125W 100PPM 1206	R190	
5322 116 80451	RESISTOR	68.00	KOHM	1% .125W 100PPM 1206	R191	
5322 116 80436	RESISTOR	220.00	KOHM	1% .125W 100PPM 1206	R192	
5322 116 80433	RESISTOR	220.00	OHM	1% .125W 100PPM 1206	R193	
5322 116 80428	RESISTOR	10.00	KOHM	1% .125W 100PPM 1206	R194	
5322 116 80448	RESISTOR	47.00	OHM	1% .125W 100PPM 1206	R195	
5322 111 90094	RESISTOR	10.00	MOHM	10% 0.25W RC-01 1206	R196	
5322 116 80438	RESISTOR	330.00	OHM	1% .125W 100PPM 1206	R197	
5322 116 80428	RESISTOR	10.00	KOHM	1% .125W 100PPM 1206	R198	
5322 116 80433	RESISTOR	220.00	OHM	1% .125W 100PPM 1206	R199	
5322 116 80442	RESISTOR	390.00	OHM	1% .125W 100PPM 1206	R200	
5322 116 80432	RESISTOR	1.50	KOHM	1% .125W 100PPM 1206	R201	
5322 116 80426	RESISTOR	100.00	OHM	1% .125W 100PPM 1206	R202	
5322 116 30239	THERMISTOR	4.70	KOHM	5% 0.5W NTC	R203	
5322 116 80438	RESISTOR	330.00	OHM	1% .125W 100PPM 1206	R204	

PM6666

TIMER/COUNTER

88-01-15

SERVICECODE	DESCRIPTION	ARTICLE	SPECIFICATION	ITEM-NO
5322 116 80438	RESISTOR	330.00 OHM	1% .125W 100PPM 1206	R205
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R206
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R207
5322 116 80438	RESISTOR	330.00 OHM	1% .125W 100PPM 1206	R208
5322 116 80444	RESISTOR	470.00 OHM	1% .125W 100PPM 1206	R209
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R210
5322 116 80444	RESISTOR	470.00 OHM	1% .125W 100PPM 1206	R211
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R212
5322 116 80438	RESISTOR	330.00 OHM	1% .125W 100PPM 1206	R213
5322 116 80437	RESISTOR	2.70 KOHM	1% .125W 100PPM 1206	R214
5322 116 80426	RESISTOR	100.00 OHM	1% .125W 100PPM 1206	R215
5322 100 11143	POTENTIOMETER	10.00 KOHM	25% 0.1W 3304X-1-103	R217
5322 116 80444	RESISTOR	470.00 OHM	1% .125W 100PPM 1206	R218
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R219
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R220
5322 116 80444	RESISTOR	470.00 OHM	1% .125W 100PPM 1206	R221
5322 116 80444	RESISTOR	470.00 OHM	1% .125W 100PPM 1206	R222
5322 116 80444	RESISTOR	470.00 OHM	1% .125W 100PPM 1206	R223
5322 116 80427	RESISTOR	1.00 KOHM	1% .125W 100PPM 1206	R224
5322 116 80437	RESISTOR	2.70 KOHM	1% .125W 100PPM 1206	R225
5322 116 80436	RESISTOR	220.00 KOHM	1% .125W 100PPM 1206	R226
5322 116 80441	RESISTOR	33.00 KOHM	1% .125W 100PPM 1206	R227
5322 116 80441	RESISTOR	33.00 KOHM	1% .125W 100PPM 1206	R230
5322 116 80436	RESISTOR	220.00 KOHM	1% .125W 100PPM 1206	R231
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R234
5322 116 80446	RESISTOR	47.00 KOHM	1% .125W 100PPM 1206	R235
5322 116 80446	RESISTOR	47.00 KOHM	1% .125W 100PPM 1206	R236
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R237
5322 116 80446	RESISTOR	47.00 KOHM	1% .125W 100PPM 1206	R238
5322 116 80446	RESISTOR	47.00 KOHM	1% .125W 100PPM 1206	R239
5322 116 80448	RESISTOR	47.00 OHM	1% .125W 100PPM 1206	R240
5322 116 80426	RESISTOR	100.00 OHM	1% .125W 100PPM 1206	R241
5322 116 80448	RESISTOR	47.00 OHM	1% .125W 100PPM 1206	R242
5322 116 80426	RESISTOR	100.00 OHM	1% .125W 100PPM 1206	R243
5322 116 80426	RESISTOR	100.00 OHM	1% .125W 100PPM 1206	R244
5322 116 80428	RESISTOR	10.00 KOHM	1% .125W 100PPM 1206	R250
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R251
5322 116 80428	RESISTOR	10.00 KOHM	1% .125W 100PPM 1206	R252
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R253
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R254
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R255
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R256
5322 116 80429	RESISTOR	100.00 KOHM	1% .125W 100PPM 1206	R257
5322 116 80441	RESISTOR	33.00 KOHM	1% .125W 100PPM 1206	R258
5322 116 80441	RESISTOR	33.00 KOHM	1% .125W 100PPM 1206	R259
5322 116 80441	RESISTOR	33.00 KOHM	1% .125W 100PPM 1206	R260
5322 100 11143	POTENTIOMETER	10.00 KOHM	25% 0.1W 3304X-1-103	R261
5322 100 11143	POTENTIOMETER	10.00 KOHM	25% 0.1W 3304X-1-103	R262
5322 100 11143	POTENTIOMETER	10.00 KOHM	25% 0.1W 3304X-1-103	R263
5322 116 80448	RESISTOR	47.00 OHM	1% .125W 100PPM 1206	R264
5322 116 80448	RESISTOR	47.00 OHM	1% .125W 100PPM 1206	R265
5322 280 20144	REED RELAY	5.00 V	HE321A0400	RE101
5322 280 20144	REED RELAY	5.00 V	HE321A0400	RE102
5322 280 70332	RELAY	5.00 V	SY-5K 1-PDL VXL	RE103
5322 280 70332	RELAY	5.00 V	SY-5K 1-PDL VXL	RE104
5322 280 70332	RELAY	5.00 V	SY-5K 1-PDL VXL	RE105
5322 414 20031	PUSH BUTTON	0.00 VKS	6.5X6.5 L-BR 30304	SK103

PM6666

TIMER/COUNTER

88-01-15

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION			ITEM-NO
4822 276 11076	KEY SWITCH	1.00	POL	DW-5112 TYPE VKS	SK103
5322 277 21124	VOLTAGE SWITCH	0.00		V202-12-MA-08-QA	SK104
5322 414 20033	PUSH BUTTON	0.00	SCHAD	6X10 M-BR 30304 ALPS	SK106
5322 276 12192	PUSH SWITCH	1.00	CELL	PM6665-69	SK106
5322 146 21229	TRANSFORMER	0.00		PM6665-69	TR101
5322 130 60845	TRANSISTOR	0.50	A	BC807-25 45V SOT23	TS100
5322 130 60845	TRANSISTOR	0.50	A	BC807-25 45V SOT23	TS101
5322 130 60845	TRANSISTOR	0.50	A	BC807-25 45V SOT23	TS102
5322 130 40781	TRANSISTOR	0.00		BFS17 .05A 15V SOT23	TS103
5322 130 44787	TRANSISTOR	0.00		BFR31 .01A 25V SOT23	TS104
5322 130 40781	TRANSISTOR	0.00		BFS17 .05A 15V SOT23	TS105
5322 130 40781	TRANSISTOR	0.00		BFS17 .05A 15V SOT23	TS106
5322 130 44787	TRANSISTOR	0.00		BFR31 .01A 25V SOT23	TS107
5322 130 40781	TRANSISTOR	0.00		BFS17 .05A 15V SOT23	TS108
5322 130 40781	TRANSISTOR	0.00		BFS17 .05A 15V SOT23	TS109
5322 130 40781	TRANSISTOR	0.00		BFS17 .05A 15V SOT23	TS110

PM6666

TIMER/COUNTER

88-01-15

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION		ITEM-NO
FRONT PANEL, U2				
5322 267 50336	CONNECTOR	10.00 PDL	22-14-2104 4455-BC	BU201
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C201
5322 130 30691	DIODE	0.25 A	BAW56 70V SOT23	GR201
5322 130 30691	DIODE	0.25 A	BAW56 70V SOT23	GR203
5322 130 30691	DIODE	0.25 A	BAW56 70V SOT23	GR204
5322 209 11129	IC	0.00	PCF8576T VS056	IC201
4822 111 90214	RESISTOR	100.00 KOHM	5% 0.25W RC-01 1206	R201
5322 414 20031	PUSH BUTTON	0.00 VKS	6.5X6.5 L-BR 30304	SK201
4822 276 11076	KEY SWITCH	1.00 PDL	DW-5112 TYPE VKS	SK201
5322 414 20031	PUSH BUTTON	0.00 VKS	6.5X6.5 L-BR 30304	SK202
4822 276 11076	KEY SWITCH	1.00 PDL	DW-5112 TYPE VKS	SK202
5322 414 60146	PUSH BUTTON	0.00 VKS	6.5X6.5 BEIGE 40317	SK203
4822 276 11076	KEY SWITCH	1.00 PDL	DW-5112 TYPE VKS	SK203
5322 414 20031	PUSH BUTTON	0.00 VKS	6.5X6.5 L-BR 30304	SK204
4822 276 11076	KEY SWITCH	1.00 PDL	DW-5112 TYPE VKS	SK204
5322 414 20031	PUSH BUTTON	0.00 VKS	6.5X6.5 L-BR 30304	SK205
4822 276 11076	KEY SWITCH	1.00 PDL	DW-5112 TYPE VKS	SK205

PM6666

TIMER/COUNTER

87-10-09

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION	ITEM-NO
KEY BOARD, US			
5322 321 22566	FLAT CABLE	50.00 MM 16-POL PE1065,PM6666	BU501
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C501
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR501
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR502
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR504
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR505
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR507
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR508
5322 130 30691	DIODE	0.25 A BAW56 70V SOT23	GR510
5322 209 11578	IC	0.00 PCF8574T 50-16L	IC501
4822 111 90339	RESISTOR	120.00 OHM 5% 0.25W RC-01 1206	R501
4822 111 90339	RESISTOR	120.00 OHM 5% 0.25W RC-01 1206	R502
4822 111 90339	RESISTOR	120.00 OHM 5% 0.25W RC-01 1206	R503
4822 111 90154	RESISTOR	270.00 OHM 5% 0.25W RC-01 1206	R504
4822 111 90339	RESISTOR	120.00 OHM 5% 0.25W RC-01 1206	R505
4822 111 90339	RESISTOR	120.00 OHM 5% 0.25W RC-01 1206	R506
4822 111 90339	RESISTOR	120.00 OHM 5% 0.25W RC-01 1206	R507
4822 111 90154	RESISTOR	270.00 OHM 5% 0.25W RC-01 1206	R508
5322 414 60038	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304 L	SK501
5322 276 11448	PUSH SWITCH	1.00 POL PM6652 SW LED GREEN	SK501
5322 414 60038	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304 L	SK502
5322 276 11448	PUSH SWITCH	1.00 POL PM6652 SW LED GREEN	SK502
5322 414 60038	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304 L	SK503
5322 276 11448	PUSH SWITCH	1.00 POL PM6652 SW LED GREEN	SK503
5322 414 60038	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304 L	SK504
5322 276 11448	PUSH SWITCH	1.00 POL PM6652 SW LED GREEN	SK504
5322 414 60036	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304	SK505
5322 276 14404	PUSH SWITCH	0.00 75120-002 SW	SK505
5322 414 60036	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304	SK506
5322 276 14404	PUSH SWITCH	0.00 75120-002 SW	SK506
5322 414 60038	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304 L	SK507
5322 276 11448	PUSH SWITCH	1.00 POL PM6652 SW LED GREEN	SK507
5322 414 60038	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304 L	SK508
5322 276 11446	PUSH SWITCH	1.00 POL 75120-050 SW LED RED	SK508
5322 414 60038	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304 L	SK509
5322 276 11446	PUSH SWITCH	1.00 POL 75120-050 SW LED RED	SK509
5322 414 60038	PUSH BUTTON	0.00 PREH 6.5X6.5 L-BR 30304 L	SK510
5322 276 11448	PUSH SWITCH	1.00 POL PM6652 SW LED GREEN	SK510

PM6665,-69

DATE: 87-05-12

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION		POS-NR
X-TAL OSCILLATOR, U4				
5322 267 54195	CONNECTOR	10.00 POL	22-15-2106 4455-AC	BU404
4822 122 31414	CAPACITOR	10.00 NF	-20/+50% 100V 2M	C401
4822 122 31237	CAPACITOR	82.00 PF	2% 100V NP0 2M	C402
5322 125 54029	CAPACITOR	18.00 PF	2-18PF 300V	C403
4822 122 31063	CAPACITOR	22.00 PF	2% 100V NP0 2M	C404
4822 122 31237	CAPACITOR	82.00 PF	2% 100V NP0 2M	C405
5322 209 11455	IC	0.00	MM74HCU04N	IC401
5322 242 74163	CRYSTAL	10.00 MHZ	PM9677 HC-49U	KT401
5322 116 55535	RESISTOR	1.00 MOHM	1% 0.4W MR25	R401
5322 116 55274	RESISTOR	215.00 OHM	1% 0.4W MR25	R402
4822 116 53108	RESISTOR	1.00 KOHM	1% 0.5W MRS25	R403
4822 116 53022	RESISTOR	10.00 KOHM	1% 0.5W MRS25	R404

PM9607

/3. oscillator (MTCXO)

Repair of this oscillator cannot be carried out by the local service organization so no spare parts are available. The complete oscillator unit must be sent to the factory for repair.

Contact your local Philips organization.

PM9604 GPIB

DATE: 87-10-08

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION			POS-NR
5322 267 60148	CONNECTOR	24.00	POL	57LE-20240-7700D35G	BU101
5322 321 22315	CABLE ASSY			PM9604	BU102
5322 124 14075	CAPACITOR	1.00	UF	20% 40V (25V) SOL AL	C1
5322 121 42525	CAPACITOR	470.00	NF	10% 63V MMKO-5 PETP	C2
5322 121 42525	CAPACITOR	470.00	NF	10% 63V MMKO-5 PETP	C3
4822 122 31414	CAPACITOR	10.00	NF	-20/+50% 100V 2M	C4
4822 122 31414	CAPACITOR	10.00	NF	-20/+50% 100V 2M	C5
4822 122 31414	CAPACITOR	10.00	NF	-20/+50% 100V 2M	C6
4822 130 30621	DIODE	0.20	A	1N4148/75 DO-35	GR1
5322 255 40233	IC-SOCKET	40.00	POL	DIL	IC1
5322 209 81264	IC			P8291A TALK/LISTEN	IC1
5322 209 51434	IC			MAB8461	IC2
5322 255 40234	IC-SOCKET	28.00	POL	DIL	IC2
5322 209 81842	IC			SN75161AN	IC3
5322 209 81807	IC			SN75160AN	IC4
4822 209 10317	IC			HEF40097BP	IC5
5322 209 84454	IC	5.00	V	MC7B05CT 1A TO-220	IC6
5322 111 94031	RES. NETWORK	47.00	KOHM	10% x6 1/BW	R1
5322 116 53232	RESISTOR	464.00	OHM	1% 0.5W MRS25	R8
5322 277 21125	DIP SWITCH	6.00	POL	206-6 RAST	SW1
4822 130 40824	TRANSISTOR			BD136 1.5A 45V TO-126	TS1

PM9605

BATTERY UNIT

87-10-08

SERVICECODE	DESCRIPTION	TECHNICAL DESCRIPTION	ITEM-NO
5322 321 22315	CABLE ASSY	130.00 MM 10-PDL PM9604,05	BU101
5322 124 10687	CAPACITOR	6.80 UF 20% 16V 6.0X3.2 MOLD	C10
5322 122 34123	CAPACITOR	1.00 NF 20% 50V X7R 0805	C11
5322 124 10686	CAPACITOR	1.00 UF 20% 16V 3.2X1.6 MOLD	C20
5322 121 50906	CAPACITOR	100.00 NF 10% 63V X7R 1206	C21
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C30
5322 124 10686	CAPACITOR	1.00 UF 20% 16V 3.2X1.6 MOLD	C31
5322 124 10685	CAPACITOR	2.20 UF 20% 6.3V 3.2X1.6 MOLD	C32
5322 122 34123	CAPACITOR	1.00 NF 20% 50V X7R 0805	C41
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C42
4822 124 20945	CAPACITOR	33.00 UF 20% 10V SOLID AL	C45
4822 124 40729	CAPACITOR	2200.00 UF 20% 6.3V RADIAL 2M	C46
5322 121 50906	CAPACITOR	100.00 NF 10% 63V X7R 1206	C47
5322 121 50906	CAPACITOR	100.00 NF 10% 63V X7R 1206	C48
4822 124 20945	CAPACITOR	33.00 UF 20% 10V SOLID AL	C49
4822 124 20945	CAPACITOR	33.00 UF 20% 10V SOLID AL	C50
5322 124 10455	CAPACITOR	68.00 UF 20% 6.3V SOLID AL	C51
5322 122 32453	CAPACITOR	10.00 NF 20% 50V X7R 0805	C52
4822 130 31982	DIODE	2.00 A BYV27-100	GR1
5322 130 33671	DIODE	0.35 W BZX84/C6V2 SOT23	GR13
5322 130 80214	DIODE	0.25 A BAS28 75V SOT143	GR2
5322 130 80214	DIODE	0.25 A BAS28 75V SOT143	GR3
5322 130 80214	DIODE	0.25 A BAS28 75V SOT143	GR4
4822 130 31982	DIODE	2.00 A BYV27-100	GR7
5322 130 80214	DIODE	0.25 A BAS28 75V SOT143	GR9
5322 209 86513	IC	0.00 UA78S40PC	IC1
5322 209 71553	IC	0.00 NE532D DUAL SO-8	IC2
5322 209 71553	IC	0.00 NE532D DUAL SO-8	IC3
4822 209 81397	IC	0.00 TL431C-LP T092	IC4
5322 209 72487	IC	5.00 V LM2940CT-5.0 T0-220	IC5
5322 157 53239	CHOKE	0.00 PM9605	L1
5322 158 10311	CHOKE	1.00 UH 10% Q=44 1641-102	L2
5322 158 10311	CHOKE	1.00 UH 10% Q=44 1641-102	L3
5322 100 11143	POTENTIOMETER	10.00 KOHM 25% 0.1W 3304X-1-103	PT1
5322 100 11144	POTENTIOMETER	500.00 OHM 25% 0.1W 8PPEN CERM	PT2
5322 100 11143	POTENTIOMETER	10.00 KOHM 25% 0.1W 3304X-1-103	PT3
5322 100 11144	POTENTIOMETER	500.00 OHM 25% 0.1W 8PPEN CERM	PT4
5322 116 53071	RESISTOR	0.22 OHM SN14L2EJ 0.22 OHM 5%	R1
5322 116 80427	RESISTOR	1.00 KOHM 1% .125W 100PPM 1206	R10
5322 116 80428	RESISTOR	10.00 KOHM 1% .125W 100PPM 1206	R12
5322 116 80443	RESISTOR	3.90 KOHM 1% .125W 100PPM 1206	R13
5322 116 80435	RESISTOR	22.00 KOHM 1% .125W 100PPM 1206	R14
5322 116 80428	RESISTOR	10.00 KOHM 1% .125W 100PPM 1206	R15
5322 116 30239	THERMISTOR	4.70 KOHM 5% 0.5W NTC	R19
5322 116 80429	RESISTOR	100.00 KOHM 1% .125W 100PPM 1206	R2
5322 116 80438	RESISTOR	330.00 OHM 1% .125W 100PPM 1206	R20
5322 116 80434	RESISTOR	2.20 KOHM 1% .125W 100PPM 1206	R23
5322 116 80446	RESISTOR	47.00 KOHM 1% .125W 100PPM 1206	R24
5322 116 80432	RESISTOR	1.50 KOHM 1% .125W 100PPM 1206	R25
5322 116 80441	RESISTOR	33.00 KOHM 1% .125W 100PPM 1206	R27
5322 116 80429	RESISTOR	100.00 KOHM 1% .125W 100PPM 1206	R3
5322 116 80428	RESISTOR	10.00 KOHM 1% .125W 100PPM 1206	R30
5322 116 80441	RESISTOR	33.00 KOHM 1% .125W 100PPM 1206	R31
5322 116 80446	RESISTOR	47.00 KOHM 1% .125W 100PPM 1206	R33
5322 116 80439	RESISTOR	3.30 KOHM 1% .125W 100PPM 1206	R34
5322 116 80439	RESISTOR	3.30 KOHM 1% .125W 100PPM 1206	R35
5322 116 80439	RESISTOR	3.30 KOHM 1% .125W 100PPM 1206	R36

PM9605

BATTERY UNIT

87-10-08

SERVICECODE	DESCRIPTION	TECHNICAL DESCRIPTION	ITEM-NO
5322 116 80439	RESISTOR	3.30 KOHM 1% .125W 100PPM 1206	R37
5322 116 80429	RESISTOR	100.00 KOHM 1% .125W 100PPM 1206	R4
5322 116 53071	RESISTOR	0.22 OHM SN14L2EJ 0.22 OHM 5%	R40
5322 116 80428	RESISTOR	10.00 KOHM 1% .125W 100PPM 1206	R41
5322 116 80426	RESISTOR	100.00 OHM 1% .125W 100PPM 1206	R42
5322 116 80427	RESISTOR	1.00 KOHM 1% .125W 100PPM 1206	R43
5322 116 80441	RESISTOR	33.00 KOHM 1% .125W 100PPM 1206	R45
5322 116 80426	RESISTOR	100.00 OHM 1% .125W 100PPM 1206	R47
5322 116 80434	RESISTOR	2.20 KOHM 1% .125W 100PPM 1206	R48
5322 116 80429	RESISTOR	100.00 KOHM 1% .125W 100PPM 1206	R5
5322 116 80433	RESISTOR	220.00 OHM 1% .125W 100PPM 1206	R50
4822 116 52195	RESISTOR	47.00 OHM 5% 0.25W SFR16T	R52
5322 116 80448	RESISTOR	47.00 OHM 1% .125W 100PPM 1206	R52
5322 116 80431	RESISTOR	150.00 OHM 1% .125W 100PPM 1206	R6
5322 116 80427	RESISTOR	1.00 KOHM 1% .125W 100PPM 1206	R7
5322 116 80428	RESISTOR	10.00 KOHM 1% .125W 100PPM 1206	R9
5322 280 70332	RELAY	5.00 V SY-5K 1-POL VXL	RE1
5322 280 70332	RELAY	5.00 V SY-5K 1-POL VXL	RE2
5322 130 44324	TRANSISTOR	0.00 BD204 8A 60V T0220	TS1
5322 130 60508	TRANSISTOR	0.00 BC857B .1A45V SOT23	TS2
5322 130 60508	TRANSISTOR	0.00 BC857B .1A45V SOT23	TS4
4822 130 60511	TRANSISTOR	0.00 BC847B .1A45V SOT23	TS5
4822 130 60511	TRANSISTOR	0.00 BC847B .1A45V SOT23	TS6
4822 130 60511	TRANSISTOR	0.00 BC847B .1A45V SOT23	TS7
5322 130 40753	TRANSISTOR	0.00 BD132 6A 45V T0126	TS9

PM9608 PRESCALER

DATE: 87-05-11

SERVICECODE	DESCRIPTION	ARTICLE	SPECIFICATION	POS-NR
5322 321 22313	CABLE ASSY	0.00	PM9608 PRESCAL	
5322 267 60199	CONNECTOR	0.00	R 114426 SMB	BU301
5322 290 30191	SOLDERING PIN	2.80 MM	E242.5 SN	BU302
5322 267 54195	CONNECTOR	10.00 POL	22-15-2106 4455-AC	BU303
5322 290 30191	SOLDERING PIN	2.80 MM	E242.5 SN	BU304
5322 122 32532	CAPACITOR	100.00 PF	5% 50V NPO 0805	C301
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C302
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C303
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C304
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C305
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C306
5322 122 32452	CAPACITOR	47.00 PF	5% 50V NPO 0805	C307
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C308
5322 122 32451	CAPACITOR	4.70 PF	5% 50V NPO 0805	C310
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C311
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C312
5322 122 32448	CAPACITOR	10.00 PF	5% 50V NPO 0805	C313
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C314
5322 122 33063	CAPACITOR	2.20 PF	5% 50V NPO 0805	C316
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C317
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C318
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C319
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C320
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C321
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C322
5322 122 32446	CAPACITOR	470.00 NF	20% 50V X7R 2220	C323
5322 122 34123	CAPACITOR	1.00 NF	20% 50V X7R 0805	C324
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C325
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C326
5322 122 32453	CAPACITOR	10.00 NF	20% 50V X7R 0805	C327
5322 130 31544	DIODE	0.03 A	BAT17 SOT23	GR303
5322 130 31544	DIODE	0.03 A	BAT17 SOT23	GR304
5322 130 31544	DIODE	0.03 A	BAT17 SOT23	GR305
5322 130 31544	DIODE	0.03 A	BAT17 SOT23	GR306
5322 130 31544	DIODE	0.03 A	BAT17 SOT23	GR307
5322 130 34337	DIODE	0.10 A	BAV99 SOT23	GR308
5322 130 31544	DIODE	0.03 A	BAT17 SOT23	GR309
5322 130 80246	DIODE	0.00	BAR 16-1 SOT23	GR311
5322 130 34337	DIODE	0.10 A	BAV99 SOT23	GR313
5322 209 71557	IC	1.20 GHZ	UPC1652G SO-8 VAR	IC301
5322 209 71554	IC	1.00 GHZ	SAB1256P /256 DIL-B	IC302
5322 209 71553	IC	0.00	NE532D DUAL SO-8	IC303
5322 157 52689	CHOKE	0.10 UH	10% MLF3216DR10K	L301
5322 157 52689	CHOKE	0.10 UH	10% MLF3216DR10K	L307
5322 111 90109	RESISTOR	470.00 OHM	5% 0.25W RC-01 1206	R301
5322 111 90109	RESISTOR	470.00 OHM	5% 0.25W RC-01 1206	R302
5322 111 90109	RESISTOR	470.00 OHM	5% 0.25W RC-01 1206	R303
4822 111 90186	RESISTOR	22.00 OHM	5% 0.25W RC-01 1206	R304
4822 111 90186	RESISTOR	22.00 OHM	5% 0.25W RC-01 1206	R305
4822 111 90186	RESISTOR	22.00 OHM	5% 0.25W RC-01 1206	R306
4822 111 90186	RESISTOR	22.00 OHM	5% 0.25W RC-01 1206	R307
4822 111 90186	RESISTOR	22.00 OHM	5% 0.25W RC-01 1206	R308
4822 111 90186	RESISTOR	22.00 OHM	5% 0.25W RC-01 1206	R309
4822 111 90154	RESISTOR	270.00 OHM	5% 0.25W RC-01 1206	R310
5322 111 90106	RESISTOR	330.00 OHM	5% 0.25W RC-01 1206	R311
5322 111 90106	RESISTOR	330.00 OHM	5% 0.25W RC-01 1206	R312
4822 111 90397	RESISTOR	8.20 OHM	10% 0.25W RC-01 1206	R313
5322 111 90098	RESISTOR	150.00 OHM	5% 0.25W RC-01 1206	R314
4822 111 90397	RESISTOR	8.20 OHM	10% 0.25W RC-01 1206	R315
4822 111 90178	RESISTOR	220.00 OHM	5% 0.25W RC-01 1206	R316

PM9608 PRESCALER

DATE: 87-05-11

SERVICECODE	DESCRIPTION	ARTICLE SPECIFICATION			POS-NR
4822 111 90217	RESISTOR	47.00 OHM	5% 0.25W RC-01	1206 R319	
5322 111 90095	RESISTOR	10.00 OHM	5% 0.25W RC-01	1206 R320	
4822 111 90217	RESISTOR	47.00 OHM	5% 0.25W RC-01	1206 R321	
4822 111 90217	RESISTOR	47.00 OHM	5% 0.25W RC-01	1206 R322	
5322 111 90091	RESISTOR	100.00 OHM	5% 0.25W RC-01	1206 R324	
4822 111 90569	RESISTOR	2.70 KOHM	5% 0.25W RC-01	1206 R325	
4822 111 90543	RESISTOR	47.00 KOHM	5% 0.25W RC-01	1206 R326	
4822 111 90248	RESISTOR	2.20 KOHM	5% 0.25W RC-01	1206 R327	
4822 111 90154	RESISTOR	270.00 OHM	5% 0.25W RC-01	1206 R328	
5322 111 90106	RESISTOR	330.00 OHM	5% 0.25W RC-01	1206 R329	
5322 101 14299	POTENTIOMETER	1.00 KOHM	10% 72X	R330	
4822 111 90543	RESISTOR	47.00 KOHM	5% 0.25W RC-01	1206 R331	
5322 111 90111	RESISTOR	4.70 KOHM	5% 0.25W RC-01	1206 R332	
4822 111 90157	RESISTOR	3.30 KOHM	5% 0.25W RC-01	1206 R333	
4822 111 90214	RESISTOR	100.00 KOHM	5% 0.25W RC-01	1206 R335	
5322 111 90111	RESISTOR	4.70 KOHM	5% 0.25W RC-01	1206 R336	
4822 111 90157	RESISTOR	3.30 KOHM	5% 0.25W RC-01	1206 R337	
5322 111 90111	RESISTOR	4.70 KOHM	5% 0.25W RC-01	1206 R338	
4822 111 90157	RESISTOR	3.30 KOHM	5% 0.25W RC-01	1206 R339	
5322 111 90267	RESISTOR	33.00 KOHM	5% 0.25W RC-01	1206 R340	
5322 111 90111	RESISTOR	4.70 KOHM	5% 0.25W RC-01	1206 R341	
5322 111 90092	RESISTOR	1.00 KOHM	5% 0.25W RC-01	1206 R342	
5322 111 90113	RESISTOR	560.00 OHM	5% 0.25W RC-01	1206 R343	
5322 111 90091	RESISTOR	100.00 OHM	5% 0.25W RC-01	1206 R344	
5322 111 90376	RESISTOR	4.70 OHM	10% 0.25W RC-01	1206 R345	
5322 111 90109	RESISTOR	470.00 OHM	5% 0.25W RC-01	1206 R347	
4822 111 90339	RESISTOR	120.00 OHM	5% 0.25W RC-01	1206 R348	
4822 111 90569	RESISTOR	2.70 KOHM	5% 0.25W RC-01	1206 R349	
4822 111 90569	RESISTOR	2.70 KOHM	5% 0.25W RC-01	1206 R350	
5322 111 90267	RESISTOR	33.00 KOHM	5% 0.25W RC-01	1206 R351	
5322 111 90111	RESISTOR	4.70 KOHM	5% 0.25W RC-01	1206 R352	
4822 111 90249	RESISTOR	10.00 KOHM	5% 0.25W RC-01	1206 R353	
5322 111 90376	RESISTOR	4.70 OHM	10% 0.25W RC-01	1206 R354	
5322 130 42567	TRANSISTOR	0.00	BFQ67 SOT23	TS301	
5322 130 42567	TRANSISTOR	0.00	BFQ67 SOT23	TS302	
4822 130 60511	TRANSISTOR	0.00	BC847B .1A45V SOT23	TS303	
4822 130 60511	TRANSISTOR	0.00	BC847B .1A45V SOT23	TS304	
5322 130 60508	TRANSISTOR	0.00	BC857B .1A45V SOT23	TS305	
5322 130 60508	TRANSISTOR	0.00	BC857B .1A45V SOT23	TS306	

SALES AND SERVICE ALL OVER THE WORLD

Alger: Bureau de Liaison Philips,
24 bis, Rue Bougainville,
El Mouradia, Alger; tel.: 213-601405

Antilles: see Ned. Antillen

Argentina: Philips Argentina S.A.,
Vedia 3892, Casilla de Correo 3479,
1430 Buenos Aires; tel.: 54-1-5414106/
54-1-5417141/5422411

Austria: see Oesterreich

Australia: Philips Scientific & Industrial,
25-27 Paul Street, P.O. Box 119, North Ryde/
NSW 2113; tel.: 61-2-8888222
Service Centre:
PCS Service,
2 Greenhills Avenue,
Moorebank, P.O. Box 269,
Liverpool/NSW 2170;
tel.: 61-2-6022000

Bangla Desh: Philips Bangla Desh Ltd.,
16/17 Kawan Bazar C/A
P.O. Box 62; Ramna, N.V. Dhaka;
tel.: 325081/5, 411976
Service Centre:
50 New Eskaton Road
Maghbazar, Dhaka; tel.: 403047

België/Belgique: Philips & MBL associated S.A.,
Scientific and Industrial Equipment Division,
80 Rue des Deux Gares, 1070 Bruxelles;
tel.: 32-2-5256111

Bolivia: E.P.T.A.
Industrias Bolivianas Philips S.A.,
Calle Mercado no. 1046,
Cajón Postal 2964, La Paz,
tel.: 341453/350029

Brasil: Philips do Brasil Ltda.,
Av. Eng. Luiz Carlos Berrini, 3009, Caixa Postal 8681,
CEP 04571-São Paulo (S.P.);
tel.: 55-11-2411611
Service Centre:
Sistemas Profissionais,
Rua Anton Philips 1,
Caixa Postal 7018,
07000 Guarulhos-S.P.;
tel.: 55-11-2090111

Canada:
FLUKE TECHNICAL CENTER
101, 1144 - 29th Avenue N.E.
Calgary, Alberta T2E 7P1
Phone: (403) 291-5215
Fax: (403) 291-5219

FLUKE TECHNICAL CENTER
1255 Trans Canada Highway
Suite 130
Dorval, Quebec H9P 2V4
Phone: (514) 685-0022
Fax: (514) 685-0039

FLUKE TECHNICAL CENTER
400 Britannia Road East
Unit 1
Mississauga, Ontario L4Z 1X9
Phone: (416) 890-7600
Fax: (416) 890-6866

FLUKE TECHNICAL CENTER
1690 Woodward Drive
Suite 216
Phone: (613) 723-9453
Fax: (613) 723-9458

Chile: Philips Chilena S.A.,
Division Professional, Avenida Santa Maria 0670,
Casilla 2687, Santiago de Chile; tel.: 56-2-7700038

Colombia: Industrias Philips de Colombia S.A.,
Calle 13 no. 51-39, Apartado Aereo 4282
Bogotá; tel.: 57-1-2600600

Danmark: Philips Industri og Handels A/S,
Prags Boulevard 80, P.O. Box 1919,
DK-2300 København S; tel.: 45-1-572222

Deutschland (Bundesrepublik): Philips GmbH,
Unternehmensbereich Elektronik für
Wissenschaft und Industrie, Miramstrasse 87,
Postfach 310 320, 3500 Kassel-Bettenhausen;
tel.: 49-561-5010

Ecuador: Philips Ecuador C.A.,
Páez 118 y Avenida Patria, Casilla 343,
Quito; tel.: 593-2-546100/546001

Egypt: Philips Egypt Branch of Philips Midden Oosten N.V.,
10, Abdel Rahman El Ralei Street -Dokki- Cairo;
tel.: 20-2-3490922/3490926/3490928/3492327

Eire: Philips Electrical (Ireland) Ltd.,
Newstead, Clonskeagh, Dublin 14; tel.: 353-1-693355

España: Philips Ibérica S.A.E.,
Martínez Villergas 2, Apartado 2065,
Madrid 28027; tel.: 34-1-4042200
Service Centre:
Euroservice S.A.
Calle de Albasanz 75, Madrid 28017;
tel.: 34-1-2045940/2047025/2047105

Ethiopia: Philips Ethiopia (Priv. Ltd. Co.),
Ras Abebe Areguay Avenue, P.O.B. 2565,
Addis Ababa; tel.: 448300/157441

Finland: see Suomi

France: S.A. Philips Industrielle et Commerciale,
Division Science et Industrie,
105 Rue de Paris, B-P. 62, 93 002 Bobigny Cedex,
tel.: 33-1-4830111

Germany: see Deutschland

Hellas (Greece): Philips S.A. Hellénique,
15, 25th March Street, P.O. Box 3153,
Athens 10210; tel.: 30-1-4894911

Hong Kong: Philips Hong Kong Ltd.,
29/F Hopewell Centre,
17 Kennedy Road, G.P.O. Box 2108,
Hong Kong; tel.: 852-5-283298

Ireland: see Eire

India: Peico Electronics & Electricals Ltd.,
I&E Equipment, Shivsagar Estate, Block "A"
Dr. Annie Besant Road, P.O.B. 6598, Worli,
Bombay 400 018 (WB); tel.: 91-22-4921500

Indonesia: P.T. Philips Development Corporation,
Jalan Gatot Subroto Kav. 35/36,
P.O. Box 785/KBY, Jakarta 12950;
tel.: 62-21-517900/5781977

Iran: Philips Iran Ltd., P.O.B. 11365-3891,
Tehran; tel.: 98-21-674138/675158

Iraq: Philips Midden Oosten B.V., Baghdad Branch,
Hai Al Whida (district), Area No. 902, Street No. 12
Building No. 141/10, P.O. Box 5749, Baghdad;
tel.: 7187181

Island: Heimilsteiki SF, Sætin 8,
Reykjavik; tel.: 24000

Italia: Philips S.p.A., Sezione I&E/T&M,
Viale Elvezia 2, 20052 Monza (MI); tel.: 39-39-36351

Japan: see Nippon

Kenya: Philips (Kenya) Ltd.,
01 Kalou Road, Industrial Area,
P.O.B. 30554, Nairobi; tel.: 254-2-557999

Lebanon: Philips Middle East S.A.R.L.,
P.O. Box 11-670, Beyrouth; tel.: 392320/1

Malaysia: Philips Malaysia Sendirian Berhad,
Wisna Philips, No. 3, Jalan SS15/2A,
47500 Petaling Jaya, Selangor, G.P.O.B. 12163,
50768 Kuala Lumpur; tel.: 60-3-7345511/7554234
Service Centre:
Lot 51, Jalan University, Section 13,
46200 Petaling Jaya; tel.: 60-3-7562144

México: Telecomunicaciones y Sistemas
Profesionales S.A. de C.V.,
Goldsmith No. 40, Col. Polanco,
11560 México, D.F.; tel.: 52-5-5406875

Morocco: Philips Maroc S.A., 304-Boulevard Mohammed V,
B.P. 40896, Bandoeng, Casablanca 05;
tel.: 212-302092/303192/308051

Nederland: Philips Nederland B.V.
Boschdijk 525, Gebouw VB,
5600 PD Eindhoven; tel.: 31-40-793333

Ned. Antillen: Philips Antillana N.V.,
Schottegatweg Oost 146, Postbus 3523,
Willemstad, Curaçao;
tel.: 599-9-615277/612799 (service)

New Zealand: Philips New Zealand Ltd.,
Scientific and Industrial Equipment Division,
68-86 Jervois Quay, G.P.O. Box 2097,
Wellington C1; tel.: 64-4-735735

Nigeria: Associated Electronic Products (Nigeria) Ltd.,
KM16, Ikorodu Road, Ojota, P.O.B. 1921, Lagos;
tel.: 234-1-900160/69

Nippon: NF Trading Co. Ltd.,
3-20 Tsunashima Higashi 6 - Chome, Kohoku-ku,
Yokohama-Shi

Norge (Norway): Norsk A.S. Philips,
Dept. Industry and Telecommunication,
Sandstuveien 70, Postboks 1, Manglerud N 0612,
Oslo 6; tel.: 47-2-680200

Oesterreich: Oesterreichische Philips Industrie GmbH,
Abteilung Industrie Elektronik,
Triesterstrasse 64, Postfach 217, A 1100 Wien;
tel.: 43-222-645521
Service Centre:
Oesterreichische Philips Industrie GmbH
Ketzergasse 120-122, A 1232 Wien;
tel.: 43-222-8662

Pakistan: Philips Electrical Co. of Pakistan Ltd.,
P.O.B. 7101, Karachi 3;
tel.: 92-21-725772

Paraguay: Philips del Paraguay S.A.,
Avenida Artigas 1519, Casilla de Correo 605,
Asunción; tel.: 595-21-291924/291934

Péru: Philips Peruana S.A.,
Av. Alfonso Ugarte 1268, Lima 5,
Apartado Aereo 1841, Lima 100; tel.: 51-14-326070

Philippines: Philips Industrial Development Inc.,
2246 Pasong Tamo, Makati, Metro Manila;
tel.: 63-2-868951/868959

Portugal: Philips Portuguesa S.A.R.L.,
1009 Lisboa Codex, Av. Eng. Duarte Pacheco 6,
1000 Lisboa; tel.: 351-1-683121/9
Service Centre:
Serviços Técnicos Profissionais, Outorela 7/Carnaxide,
2795 Linda-a-Velha; tel.: 351-1-2180071

Saudi Arabia: Delegate Office of Philips Industries,
P.O. Box 9844, Riyadh 11423; tel.: 966-1-4777808

Schweiz-Suisse-Svizzera: Philips A.G., S&I Equipment,
Allmendstrasse 140, Postfach 670, CH-8027 Zurich;
tel.: 41-1-4882211

Singapore: Philips Singapore Private Limited,
Lorong 1, Toa Payoh, Singapore 1231,
P.O. Box 340 - Toa Payoh Central Post Office,
Singapore 9131; tel.: 65-3502000 (N.O.)

South Africa: South African Philips (Pty) Ltd.,
2 Herb Street, P.O.B. 7203, New Doornfontein,
Johannesburg 2000; tel.: 27-11-6179111

South Korea: Philips Electronics (Korea) Ltd.,
260-199 Itaewon-dong, Yongsan-ku, Philips House
C.P.O. Box 3680, Seoul, Korea 140;
tel.: 82-2-794-5011/5

Spain: see España

Suomi: Oy Philips AB, Kaivokatu 8,
P.O. Box 255, SF-00101 Helsinki;
tel.: 358-0-17271
Service Centre:
Sinikallio 1-3, P.O. Box 11,
SF-02630 Espoo; tel.: 358-0-52571

Sverige (Sweden): Philips Försäljning AB,
Div. Industri Elektronik, Tegelvadsvägen 1,
S 115 84 Stockholm; tel.: 46-8-7821000

Syria: Philips Moven-Orient S.A.R.L.,
Rue Fardoss 79, B.P. 2442, Damas;
tel.: 218605/221650/228003/221025

Taiwan: Philips Taiwan Ltd.,
150, Tun Hua North Road,
P.O. Box 22878, Taipei;
tel.: 886-2-712-0500

Tanzania: Philips (Tanzania) Ltd.,
T.D.F.L. Building (1st floor), Ohio/Upanga Road
P.O. Box 20104, Dar es Salaam; tel.: 29571/4

Thailand: Philips Electrical Co. of Thailand Ltd.,
283 Silom Road, P.O. Box 961, Bangkok 10500;
tel.: 66-2-233 6330.9/2355 665.8
Service Centre:
29/1 Sanpavud Road, Bangna, Prakanong,
Bangkok 10110; tel.: 66-2-396-1639/393 8772-6/
66-2-396-1437

Tunisia: S.T.I.E.T., 32 bis, Rue Ben Ghedhahem,
Tunis; tel.: 216-1-348666

Türkiye: Türk Philips Ticaret A.S.,
İnönü Caddesi 78/80, Posta Kutusu 504,
80074 Beyoğlu, İstanbul; tel.: 90-1-1435810

United Arab Emirates: Philips Middle East B.V.,
Dubai International Trade Centre, 11th floor,
P.O. Box 9269, Dubai; tel.: 971-4-37700

United Kingdom: Pye Unicam Ltd., York Street,
Cambridge CB1-2PX; tel.: 44-223-358866
Service Centre:
Pye Unicam Ltd., Service Division,
Beddington Lane, Croydon CR9-4EN;
tel.: 44-1-6843670

Uruguay: Industrias Philips del Uruguay S.A.,
Avda Uruguay 1287, Casilla de Correo 294,
Montevideo; tel.: 915641/2/3/4-919009
Service: 387777-387878-388484

U.S.A.:
FLUKE TECHNICAL CENTER
2020 N. Lincoln St. (ZIP 91504)
P.O. Box 7366
Burbank, CA 91510
Phone: 213-849-4641
Fax: 818-846-7949

FLUKE TECHNICAL CENTER
West 75 Century Rd.
P.O. Box 930
Paramus, NJ 07653-0930
Phone: 201-262-9550
Fax: 201-262-0948

FLUKE TECHNICAL CENTER
2300 Walsh Avenue, Bldg. K
Santa Clara, CA 95051
Phone: 408-727-8121
Fax: 408-980-0385

FLUKE TECHNICAL CENTER
5640 Fishers Lane
Rockville, MD 20852
Phone: 301-770-1576
Fax: 301-770-1365

FLUKE TECHNICAL CENTER
14180 East Evens Ave.
Aurora, CO 80014
Phone: 303-695-1000
Fax: 303-750-8566

FLUKE TECHNICAL CENTER
940 N. Fern Creek Avenue
Orlando, FL 32803
Phone: 305-896-4881
Fax: 305-896-9568

FLUKE TECHNICAL CENTER
1150 W. Euclid Ave.
Palatine, IL 60067
Phone: 312-705-0500
Fax: 312-705-1505

FLUKE TECHNICAL CENTER
1801 Royal Lane, Suite 307
Dallas, TX 75229
Phone: 214-869-0311
Fax: 214-556-1878

Venezuela: Industrias Venezolanas Philips S.A.,
Apartado Aereo 1167, Caracas 1010-A;
tel.: 58-2-203.7111

Zaire: S.A.M.E./s.a.r.l., 137, Boulevard du 30 juin,
B.P. 16636, Kinshasa; tel.: 31887-31888-31921

Zambia: Philips Electrical Zambia Ltd.,
Mwembeshi Road, P.O.B. 31878, Lusaka
tel.: 218511/218701/218321

Zimbabwe: Philips Electrical (Pvt) Ltd.,
62 Mutare Road, P.O. Box 994, Harare;
tel.: 47211/48031

For information on change of address:

Philips Export B.V.,
Industrial & Electro-acoustic Systems Division,
Test & Measurement, Building TQ III - 4, P.O. Box 218,
5600 MD Eindhoven - The Netherlands
Tel. 31-40-788476